Prepared for

County of Sonoma
Department of Transportation and Public Works
117A Administrative Building
575 Administration Drive
Santa Rosa, California 95403

REVISED
JOINT TECHNICAL DOCUMENT
CENTRAL DISPOSAL SITE
Sonoma County, California

Volume II
Appendices A - C
May 31, 2005

Prepared by:

GeoSyntec Consultants, Inc.
1500 Newel1 Avenue, Suite 800
Walnut Creek, California 94596
(925) 943-3034

Project Number: WL0062
31 May 2005

APPENDIX A

Facility Overview

APPENDIX A-1

Legal Descriptions of the Site Boundary

Recorded at Request of
DeMEO, DeMEO, FOSTER, WANER & HOOD

When Recorded Return to
DeMEO, DeMEO, FOSTER, WANER & HOOD
1022 Mendocino Avenue
Santa Rosa, California 95401

Documentary Transfer Tax $ None
computed on full value of property conveyed
DeMeo, DeMeo, Foster, Waner & Hood
By Redwood Empire Title Co.
Agent for Grantee

RECORDED AT REQUEST OF
R E T CO
AT MIN. PAST 12 M
Sonoma County, California
RECORDER
FEB 1 1 1971
OFFICIAL RECORDS BOOK 2513 PAGE 57
FEES $ no fee PD.
L 97788

EXECUTOR'S DEED

In consideration of the sum of $118,167.00, receipt of which is hereby acknowledged, I, LOUIS STEFENONI, executor of the will of ERMINIA STEFENONI, deceased, hereby GRANT to the County of Sonoma, a political subdivision of the State of California, all the right, title and interest of said decedent at the time of said decedent's death, and all right, title and interest that said decedent's estate may have subsequently acquired by operation of law or otherwise in and to the real property situated in an unincorporated area of the County of Sonoma, State of California, described as follows:

(See Exhibit "A" attached hereto)

This deed is made pursuant to the order of the Superior Court of the State of California, for the County of Sonoma, made in the matter of the Estate of ERMINIA STEFENONI, deceased, proceeding No. 33312, on November 23, 1970, confirming said sale of said real property and directing a conveyance.

Dated: December 21, 1970.

Louis Stefenoni

State of California, County of Sonoma:

On December 21, 1970, before me, the undersigned, a Notary Public in and for said State, with principal place of business in said County, personally appeared LOUIS STEFENONI, as executor of the will of ERMINIA STEFENONI, deceased, known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same as such.

B. Scott Foster
Notary Public

Mail Tax Statements to:

B. SCOTT FOSTER
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SONOMA COUNTY

EXHIBIT "A"

An undivided one-half (½) interest in and to the following described real property.

Being a portion of the lands of Lui Stefenoni, et ux, as recorded in Book 570, Official Records, page 28, and being more particularly described as follows:

PARCEL 1

That certain 392.20 acre parcel shown as Parcel 1 on the Record of Survey of the lands of Lui Stefenoni, et ux, as recorded in Book 146, Maps, page 10.

PARCEL A

A strip of land thirty-six (36) feet in width measured at right angles, and parallel and adjacent to, the easterly line of Parcel 2 as shown on the Record of Survey of the lands of Lui Stefenoni, et ux, as recorded in Book 146, Maps, page 10, and running from the northerly boundary of said Parcel 2 to the southerly boundary of said Parcel 2.

Containing 0.89 acres, more or less, of which 0.40 acres, more or less, is not now used.

Acquired for road and water line purposes.

Being a portion of the lands of Lui Stefenoni, et ux, as described in Book 592, Official Records, page 394, and being more particularly described as follows:

PARCEL B

A strip of land sixteen (16) feet in width, measured at right angles, and parallel and adjacent to the most easterly line of the said lands of Lui Stefenoni, et ux, said easterly line also being the most westerly line of Meacham Road as described in Book 184, Deeds, page 33; and running from the northerl boundary of the lands of Stefenoni, said boundary being the southerly boundary of the right of way of the Petaluma and Santa Rosa Railroad, to the southerly boundary of Stefenoni, said boundary being the northeasterly boundary of the lands of Lui Stefenoni, et ux, as described in Book 570, Official Records, page 28.

Containing 2.52 acres, more or less, of which 1.12 acres, more or less, is not now used.

Acquired for road and water line purposes.

PARCEL C

COMMENCING at a 3/4 inch iron pipe marking the southeasterly corner of the lands of Lui Stefenoni as described in Book 592, Official Records, page 394; thence S. 74° 41' 35" E., 11.95 feet; thence N. 12° 42' 35" E., 1386.71 feet; thence N. 20° 48' 45" E., 1138.39 feet; thence N. 21° 02' 55" E., 536.24 feet; thence N. 56° 23' 05" W., 20.36 feet to a point on the easterly line of the lands of Stefenoni, said point being the point of beginning of the herein described parcel; thence continuing N. 56° 23' 05" W. parallel to and 15.00 feet measured at right angles from the southwesterly right-of-way line of the Petaluma and Santa Rosa Railroad, 168.76 feet; thence N. 67° 29' 25" W. parallel and 15.00 feet measured at right angles from said southwesterly line of said Railroad 147.23 feet; thence S. 14° 56' 35" W., 35.00 feet; thence N. 64° 08' 25" W., 50.00 feet; thence N. 14° 56' 35" E., 50.00 feet to the southwesterly line of the Petaluma and Santa Rosa Railroad; thence southeasterly along said southwesterly line to a point from which the point of beginning bears S. 21° 10' W., 15.47 feet; thence S. 21° 10' W., 15.47 feet to the point of beginning.

Containing 0.166 acres, more or less.

Acquired for well site, access, and utility purposes.

Basis of Bearings: Happy Acres Record of Survey.

CERTIFICATE OF ACCEPTANCE
(Government Code 27281)

This is to certify that the interest in real property conveyed by the deed or grant dated December 21, 19 70 from Louis Stefenoni, executor of the will of Erminia Stefenoni, Dec'd.

to County of Sonoma, a political subdivision of the State of California,

a political corporation and/or governmental agency is hereby accepted by order of the Board of Supervisors of the County of Sonoma

on December 7, 19 70, (or by the undersigned officer or agent on behalf of the County of Sonoma

pursuant to authority conferred by resolution of the Board of Supervisors of Sonoma County

adopted on December 7, 19 70,) and the grantee consents to recordation thereof by its duly authorized officer.

Dated: February 10, 19 71.

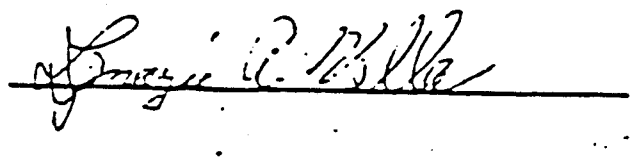


EXHIBIT "A"

Lying within the Rancho Roblar de la Miseria and being a portion of the lands of EUGENE CAMOZZI AND LYDIA CAMOZZI, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ½ INTEREST; AND ROBERT CAMOZZI AND GLORIA CAMOZZI, HUSBAND AND WIFE AS JOINT TENANTS, AS TO AN UNDIVIDED ½ INTEREST as described in deeds recorded as Document Number 1991 0038893 and Document Number 1994 0102345 of Official Records, Sonoma County Records and being more particularly described as follows.

Parcel A

COMMENCING at a point in the northerly line of Parcel 1 as shown on the Record of Survey of the lands of Lui Stefenoni, et ux, as recorded in Book 146, of Maps, Page 10 from which Engineer's Station 68+51.58 P.O.C. as shown on a map entitled "Mecham Road" dated June 1971 and on a map entitled "Lands to be deeded to L. and E. Stefenoni at Central Area Disposal Site dated February 1972 on file in the office of the Sonoma County Department of Public Works bears South 82° 26′ 42″ East, 41.38 feet; also from said point of commencement a ½ inch iron pipe monument found and tagged L.S. 2798 in said northerly line bears South 82° 26′ 42″ East, 30.49 feet; thence from said point of commencement and along said northerly line North 82° 26′ 42″ West, 1056.75 feet to another ½ inch iron pipe monument found and tagged L.S. 2798 marking an angle point in said northerly line; said ½ inch iron pipe monument found being designated as point "A"; thence North 44° 47' 18" West, 15.21 feet, to a #5 rebar monument with a 2 inch cap stamped Sonoma County Department of Transportation and Public Works and the POINT OF BEGINNING; thence North 44° 47' 18" West, 1107.23 feet, to a #5 rebar monument with a 2 inch cap stamped Sonoma County Department of Transportation and Public Works; thence South 76° 30' 16" East, 853.72 feet, to a #5 rebar monument with a 2 inch cap stamped Sonoma County Department of Transportation and Public Works; thence South 04° 52' 58" West, 588.72 feet to the POINT OF BEGINNING.

Containing 5.70 acres, more or less

Parcel B

COMMECING at point "A" as designated in PARCEL "A"; thence from said point of commencement and along above said northerly line N. 44° 47' 18" W., 494.47 feet to a ¾ inch iron pipe monument set and marked "CSSC"; said ¾ inch iron pipe set being the true point of beginning of the hereinafter described parcel; thence from said

D

point of beginning and continuing along said northerly line N. 44° 47' 18" W., 406.40 feet to another ¾ inch iron pipe monument set and marked "CSSC"; thence leaving said northerly line S. 7° 19′ 55″ W., 219.24 feet to another ¾ inch iron pipe monument set and marked "CSSC"; thence S. 77° 16′ 24″ E., 322.20 feet to the point of beginning.

Containing 0.81 acres, more or less

This legal description was prepared by me or under my direction in conformance with the requirements of the Land Surveyor's Act.

PROFESSIONAL LAND SURVEYOR
STEPHEN M. FREDERICKS
No. 7072
STATE OF CALIFORNIA

Stephen M. Fredericks, Exp. 12/31/98

APN 24-080-018 PTN.

STEVEN M. WOODSIDE #58684
County Counsel
NEIL C. BAKER #56493
Chief Deputy County Counsel
County of Sonoma
575 Administration Dr., Rm. 105A
Santa Rosa, California 95403-2881
Telephone: (707) 565-2421

Attorneys for Plaintiff

ENDORSED
FILED

JAN 19 2000

SUPERIOR COURT OF CALIFORNIA
COUNTY OF SONOMA

SUPERIOR COURT OF CALIFORNIA, COUNTY OF SONOMA

COUNTY OF SONOMA, a political subdivision of the State of California,

Plaintiff,

vs.

EUGENE CAMOZZI and LYDIA CAMOZZI, Husband and Wife; ROBERT CAMOZZI and GLORIA CAMOZZI, Husband and Wife, *et al.*,

Defendants.

No. SCV-223124

NOTICE OF DEPOSIT OF PROBABLE JUST COMPENSATION; APPLICATION FOR ORDER OF IMMEDIATE PREJUDGMENT POSSESSION; DECLARATION OF APPRAISER; DECLARATION OF ENGINEER; ORDER OF POSSESSION

(General Civil Case)

I.

NOTICE OF DEPOSIT

TO DEFENDANTS NAMED HEREIN:

PLEASE TAKE NOTICE that a deposit of money for the benefit of those persons of record having an ownership interest in the property that is the subject of this eminent domain action was made on January 19, 2000, in the Sonoma County Superior Court in the amount of $26,850.00. The property affected by the easements to be acquired is a portion of Assessor's Parcels Nos. 024-080-018 and 024-080-027 and the known owners of record are Eugene and Lydia Camozzi, husband and wife, and Robert and Gloria Camozzi, husband and wife.

II.
APPLICATION FOR ORDER OF PREJUDGMENT POSSESSION

Pursuant to Code of Civil Procedure section 1255.410, plaintiff applies for an order of possession of the property interests described in the Complaint on file in this action. The property interests to be acquired are needed for the construction of the Central Landfill Expansion Project (the"Project"), which will be carried out in the unincorporated area of Sonoma County. The Project will involve the construction of a recycling/reuse area, a public tipping facility, and a household hazardous waste collection facility. It is imperative that the Project be completed as soon as possible in order to increase the capacity of the County's Central Landfill.

The property owned by the Defendants consists of two Assessor's Parcels (024-080-018 and 024-080-027) of agricultural land with a total of approximately 372 acres. The property to be acquired in this eminent domain action consists of approximately 6.5 acres of land located approximately 6 miles south of the City of Santa Rosa, adjacent to the County of Sonoma's Central Landfill (the "Parcel"). For the Project to proceed, the County must finalize permits from the State Integrated Waste Management Board and the State Regional Water Quality Control Board. In order to process the permit applications, the County must have an order of possession with respect the Parcel. Therefore, the County is applying at this time for an order of possession under Code of Civil Procedure section 1255.450(b) which entitles the County of Sonoma to possession of the Parcel ninety (90) days after service of the order to satisfy the permit requirements. However, the actual construction schedule for the various phases of the Project will require access to the Property earlier than the ninety day period, and the County is attempting to secure permission from the property owners for such access. In the event that the negotiations are not successful, the County will apply to the Court for a superseding order of immediate possession pursuant to Code of Civil Procedure section 1255.410(c).

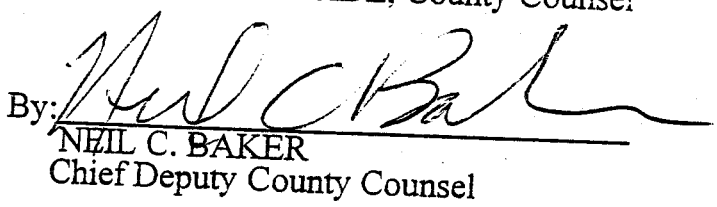
As shown by the complaint on file in this action, the plaintiff is entitled to acquire the property interests described in the complaint by eminent domain, and the appraised amount

of probable compensation of $26,850.00 is hereby tendered by the County and shall immediately be deposited with the Clerk of the Superior Court pursuant to the provisions of Code of Civil Procedure section 1255.010, et seq.

Respectfully submitted,

Dated: January 18, 2000

STEVEN M. WOODSIDE, County Counsel

By: 
NEIL C. BAKER
Chief Deputy County Counsel

Attorneys for Plaintiff.

III.
DECLARATION OF APPRAISER

I, DAVID LEWIS, declare:

I am the Manager of the Right-of-Way Section of the Sonoma County Department of Transportation and Public Works. That Section is responsible for the acquisition of property needed for the construction of public works of improvement undertaken by the County of Sonoma. From 1972 to the present, I have had extensive experience in the fields of property appraisal and acquisition as well as land use planning. In addition to my present position, I was employed by the San Bernardino County Department of Real Estate Services, the San Bernardino County Office of Planning, and the cities of Victorville and Fontana. I am a Senior Member of the International Right-of-Way Association (SR/WA) and a Senior Member of the American Society of Appraisers, and regularly teach classes and participate in seminars relating to substantive and procedural appraisal issues and the acquisition of property interests by public entities. During my career I have appraised all types of real property for the purpose of determining fair market value.

The property needed for the Central Landfill Expansion Project (the "Project") was appraised using established methods of valuation including, as appropriate, the comparable

sales, cost, and income approaches. A formal offer of just compensation was made to the owners based on an appraisal conducted by the County and other pertinent information.

I am familiar with the proposed Project and the property interests necessary to construct it, and I have specifically inspected the property to be acquired in this action. I have conducted a review of appraisal for the property owned by the defendants. Based on that review and my knowledge of the property, it is my opinion that the fair market value of the property being condemned, including severance damages and compensation for site improvements, if any, is as follows:

PARCEL	TOTAL AMOUNT
A. P. Nos. 024-080-018 & 027	$26,850.00

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this Declaration was executed on January 18, 2000 at Santa Rosa, California.

DAVID LEWIS

IV.
DECLARATION OF ENGINEER

I, SUSAN KLASSEN, declare:

I received a Bachelor of Science degree in Civil Engineering from California State University, Chico in 1982. I hold license No. 39859 as a professional Civil Engineer in the State of California. In 1998, I completed my Solid Waste Association of North America - Manager of Landfill Operations Training and successfully completed the exam, receiving certification No. 38993.

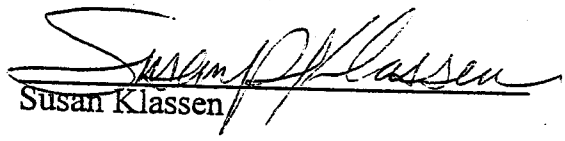
Since graduation from college I have worked continuously in the field of Civil Engineering, first with California Department of Transportation as a Junior Civil Engineer, then with Kern County Public Works Department as an Assistant Civil Engineer, before

coming to Sonoma County. I worked with Kern County for two and one-half years in their Environmental Division where I was responsible for monitoring landfill and transfer station operations and performing project engineering of related capital improvements.

I have been employed by the County of Sonoma in the Department of Transportation and Public Works for 14 and one-half years. I worked as a Civil Engineer in the Refuse Division for the first several years and then transferred into the Road Division where I worked as a Senior Engineer responsible for County road, bridge and water system projects. Since November 1997, I have held the position of Engineering and Operations Division Manager and am responsible for the supervision and management of the Refuse Division within the Integrated Waste Division of the Department. I am responsible for the management of Sonoma County's Central Landfill, its five Refuse Transfer Stations, and its seven closed landfill sites. My responsibilities extend to supervision and management of all capital improvement projects, this responsibility extends to all phases of such projects from conceptualization through construction. I have specific responsibility for the Central Landfill Operation Improvement Project. As a result, I am familiar with both the purposes for the Improvement Project and its design details.

I am also familiar with the property owned by the Defendants and, specifically, the Parcel that is the subject of this eminent domain. It is necessary for the County to acquire the Parcel to construct the Central Landfill Expansion Project, and in order to process the County's permit application for the Project with the State Integrated Waste Management Board, the County must have an order for possession of the Parcel.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this Declaration was executed on January 18, 2000, at Santa Rosa, California.



Susan Klassen

IV.
ORDER FOR PREJUDGMENT POSSESSION

On consideration of plaintiff's application for an order of possession of the property interests described in the complaint on file in this action, and the Court having determined that the plaintiff is entitled to acquire the property by eminent domain and that plaintiff has tendered a deposit of the probable just compensation and filed a summary of the basis of appraisal, both of which meet the requirements of Code of Civil Procedure sections 1255.010, et seq.,

IT IS ORDERED that plaintiff is authorized and empowered to take possession and use of the property described in the complaint, and to remove any and all persons, obstacles, improvements or structures of any kind or nature located on the property.

IT IS FURTHER ORDERED that this Order shall be effective ninety (90) days after service of this Order on the owners of record of the property described in the Complaint on file in this action or on their attorney of record.

IT IS FURTHER ORDERED that the plaintiffs' deposit of probable just compensation shall be deposited in an interest bearing account in the County Treasury.

DATED: JAN 19 2000.

LLOYD VON DER MEHDEN

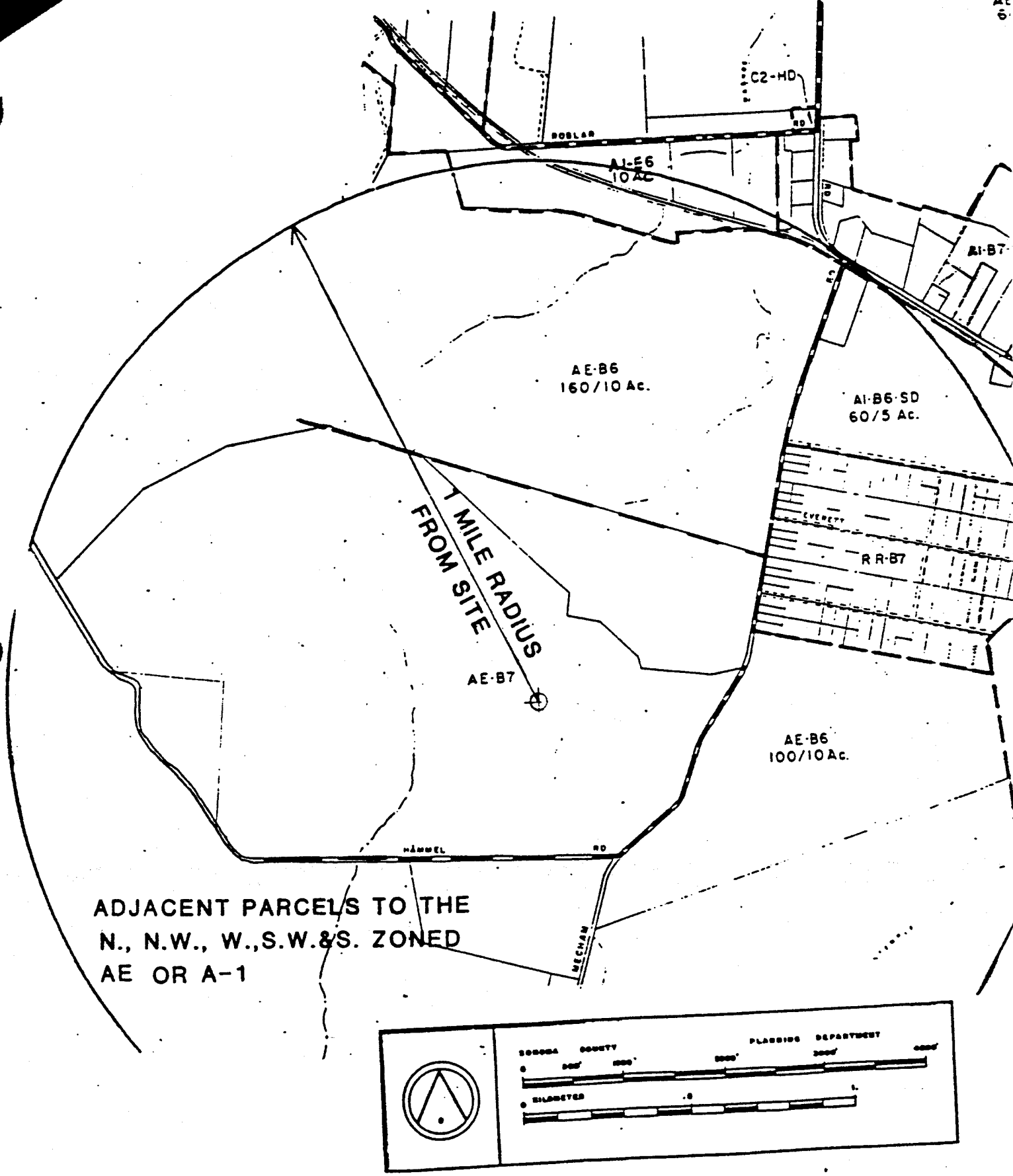
JUDGE OF THE SUPERIOR COURT

APPENDIX A-2

Central Disposal Site Development Plans

APPENDIX A-3

Zoning and General Plan Maps



Source: Taber Consultants, SWAT Report
June, 1987

Site Zoning Ma
Figure-1

Sonoma County General Plan

Figure LU-5h

Land Use Plan Map
Petaluma and Environs

Public/Quasi-Public (see symbols below)

Proposed Existing

Parks

Schools

Wastewater Mgt. Facilities

Solid Waste Disposal Facilities

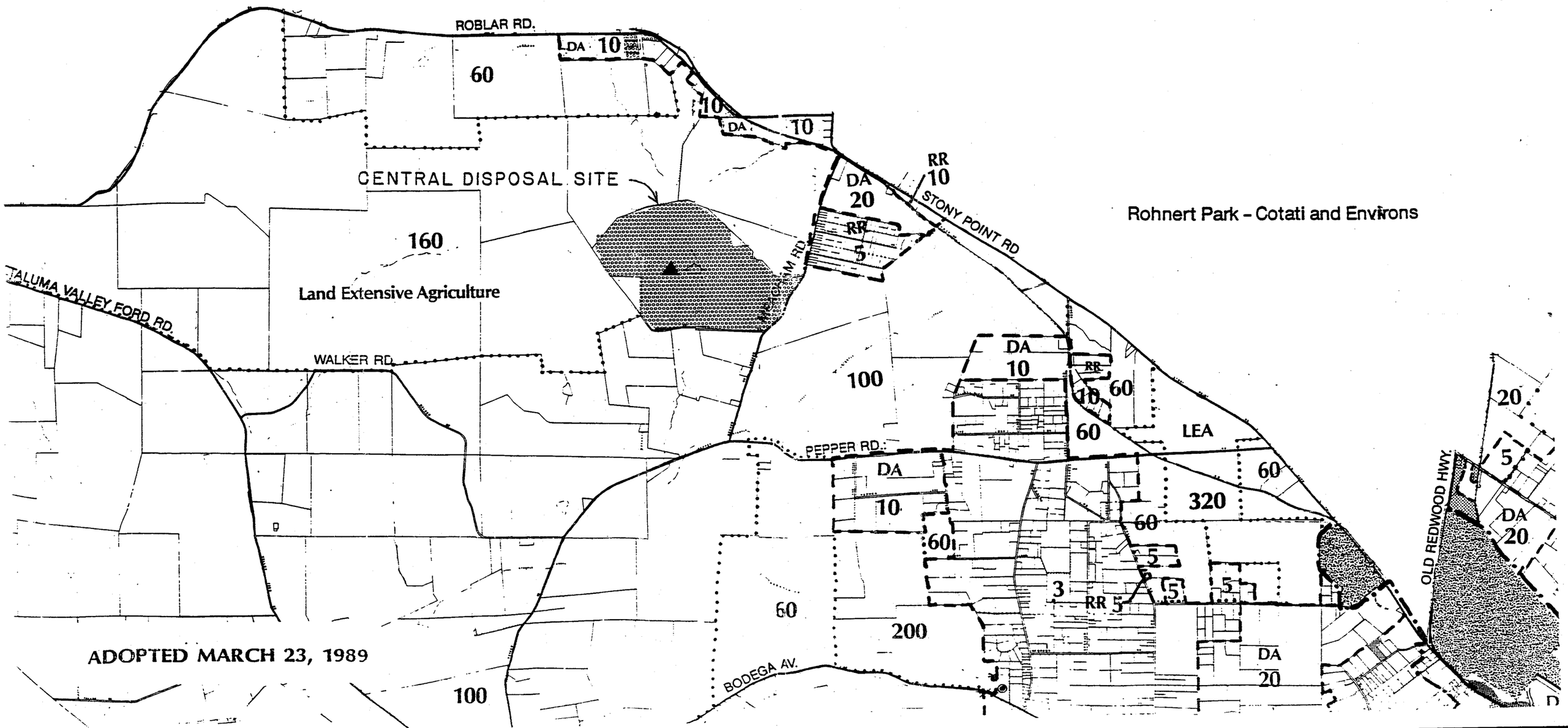
LIA Land Intensive Agriculture (2)

LEA Land Extensive Agriculture (2)

DA Diverse Agriculture (2)

RRD Resources and Rural Development (2)

(1) Numbers on map indicate maximum density in units/acre
(2) Numbers on map indicate maximum density in acres/unit



ADOPTED MARCH 23, 1989

APPENDIX A-4

Hydrogeologic Map and Cross-Sections

APPENDIX A-5

Traffic Report

CRANE TRANSPORTATION GROUP

TRAFFIC AND TRANSPORTATION PLANNING AND ENGINEERING

TRAFFIC REPORT
SONOMA COUNTY CENTRAL LANDFILL
CIRCULATION IMPACTS OF
PROPOSED ACTIVITIES

- Removal of Gravel from the Central Landfill Site
- Household Hazardous Waste Disposal

May 5, 1994

Prepared For: Sonoma County Department of Public Works

Prepared By: Crane Transportation Group
300 Taraval Street
San Francisco, California

300 TARAVAL STREET • SAN FRANCISCO, CALIFORNIA 94116 • 415/282-9656 • 415/665-2646

SONOMA COUNTY CENTRAL LANDFILL
TRAFFIC REPORT

I. INTRODUCTION

This report has been prepared at the request of the Sonoma County Department of Public Works to ascertain the circulation system impacts resulting from two proposed activities at the County's Central Landfill on Mecham Road: additional truck activity associated with hauling 700,000 cubic yards of gravel from the landfill site and additional vehicle activity associated with the landfill accepting household hazardous waste products. Existing traffic conditions have been determined through field surveys by a registered traffic engineer and an extensive series of traffic counts conducted by County Public Works on the roadways providing access to the Central Landfill. Projections of truck/vehicle activity associated with the two proposed uses have been developed by County Public Works and this traffic has been distributed to the local roadway network in a variety of routings that would be representative of all possible access scenarios. Roadway and intersection impacts have then been determined for the individual and combined traffic activity of the proposed uses for the various access scenarios. Cumulative year 2000 traffic conditions have also been determined based upon recent volume projections from the County's CMP modeling program. Finally, measures have been recommended to mitigate any significant existing conditions and/or project or year 2000 traffic impacts.

II. SUMMARY OF FINDINGS

1. All intersections and roadways providing immediate access to the Sonoma County Central Landfill on Mecham Road are now operating at good levels of service (A or B) during the AM peak commute traffic hour (7:00-8:00 AM), the time of overall highest ambient-plus-landfill traffic. No analyzed intersection has AM peak hour volumes close to meeting signal warrant criteria levels.

2. Two intersections, Stony Point Road at Pepper Road and West Railroad Avenue at the U.S. 101 Northbound Off-Ramp now have borderline acceptable sight lines on one intersection approach each.

3. The addition of peak household hazardous waste (HHW) traffic only (up to 6 inbound and outbound vehicles per hour) to existing volumes would produce no measurable impacts to intersection or roadway level of service operation.

4. The addition of peak quarry truck traffic only (up to 12 inbound and outbound vehicles per hour) to existing volumes would produce no significant impacts to intersection or roadway level of service operation.

5. The addition of both HHW and quarry truck traffic to existing volumes would produce no significant impacts to intersection or roadway level of service operation. No nearby intersections would have AM peak hour volumes coming close to meeting signal warrant criteria levels. Project traffic would, however, increase safety concerns at those intersections with only borderline acceptable sight lines.

6. With year 2000 volumes (including HHW and quarry traffic) all intersections and roadways providing access to the Central Landfill should be operating at good to acceptable levels (levels A or B) during the AM peak traffic hour. Both the Stony Point Road/Roblar Road and Stony Point Road/Mecham Road intersections would have volumes on the borderline of meeting rural peak hour signal warrant criteria levels.

7. Recommendations are as follows:

- Consideration should be given to posting reduced speed advisory signs on the Stony Point Road approaches to Pepper Road and the West Railroad Avenue approaches to the U.S. 101 northbound off-ramp – or – making the Stony Point Road/Pepper Road and West Railroad Avenue/U.S. 101 Northbound Ramps intersections all-way stops. Alternatively, brush and tree removal along the west side of Stony Point Road north of Pepper Road could potentially produce better than borderline acceptable sight lines at this location. Sight line blockage at the West Railroad Avenue/U.S. 101 Northbound Off-Ramp intersection is due to a freeway bridge abutment which cannot be moved, thus, provision of reduced speed advisory signs or an all-way stop are the only solutions to the sight distance concerns at this location.

- No quarry truck traffic should be routed along Pepper Road.

- The Stony Point Road/Roblar Road and Stony Point Road/Mecham Road intersections should be signalized, when warranted.

- Mecham Road should be repaved, when needed.

III. PROJECT DESCRIPTION

The County of Sonoma is proposing two separate projects at their Central Landfill, located along Mecham Road about 1.25 miles southwest of Stony Point Road. The first would be development of a waste facility for disposal of household and small quantity generator business hazardous waste. The second would involve removal of gravel from the landfill in order to provide more room for additional non-hazardous refuse disposal.

A. HOUSEHOLD HAZARDOUS WASTE (HHW)

HHW products would be accepted at the County Central Landfill from 7:30 AM to 3:30 PM, three days per week. On two of the three days each week, hazardous waste from households would be accepted. On a third day, hazardous waste from small quantity generator businesses would be accepted.

- Approximately 1,500 additional vehicles per year or, on average, 15 additional vehicles in and out per day would result from the new household delivery of hazardous waste. This would equal from 2 to 3 net new vehicles (primarily autos or pickups) entering and leaving the Central Landfill during any one hour from 7:30 AM to 3:30 PM. In addition, a mobile HHW disposal unit (stored at the Landfill) would travel to various parts of the County once each week. This vehicle would leave from 7:00 to 9:00 AM and would return in the late afternoon.

- Approximately 2,250 additional vehicles per year, or, on average, 43 additional vehicles in and out per day would result on the one day per week small quantity generator businesses could bring hazardous waste to the Central Landfill facility. This would result in a "worst case" maximum of about 6 new vehicles entering and leaving the Central Landfill during any one hour from 7:30 AM to 3:30 PM. Appointments would be required for all prospective users.

- In addition to the above mentioned new traffic, an additional 6 hazardous waste disposal trucks in and out each month (or 72 per year) would be added to the local roadway network. This would average 1 to 2 new in- and outbound trips per week. Six to 8 new staff are expected at the Central Landfill as part of this new operation. Staff would arrive at the landfill from 6:30 to 7:00 AM and would leave from 4:00 to 4:30 PM.

HHW traffic would be expected to distribute on a regional basis in a pattern similar to that of the distribution of population through the County (i.e., 65% to the north of the landfill and 35% to the south).

B. GRAVEL REMOVAL

- A large rock outcrop at the Central Landfill needs to be excavated, crushed and removed in order to make additional space for refuse. Approximately 700,000 cubic yards of gravel would be removed over a three- to four-year time period as part of this project. Since the crushed gravel cannot be used as cover material for the refuse, it must be removed from the site.

Two alternative plans are being considered by the County for transport of material from the site.

  - Alternative 1: All gravel would be processed on-site by a lessee and then sold directly for retail use from the Central Landfill. Truck traffic levels would be dependent upon market demand.

  - Alternative 2: All gravel would be transported to an off-site location for processing and sale.

- Gravel truck traffic could occur from 7:00 AM to 4:00 PM, six days per week (not on Sunday).

- With Alternative 1, on average 6 round trips per hour for 8 hours each day would be likely. However, there would also be times when up to 12 trucks per hour in and out would be possible (potentially for two to three weeks per year) at times of peak market demand.

- With Alternative 2, on average 6 round trips per hour for 8 hours each day would be likely.

- Distribution patterns of truck traffic to/from the Central Landfill considered likely by County Public Works are as follows:

  - Alternative 1:

    - 50% north/50% south (via Mecham Road to Stony Point Road) then north or south on Stony Point Road to the nearest interchange with the U.S. 101 freeway or other regional roadway.

    - 100% north of the Landfill (via Mecham Road to Stony Point Road - then north to S.R. 116).

  - Alternative 2:

    - 100% north of the Landfill (via Mecham Road to Stony Point Road - then north on Stony Point Road, potentially to the Stony Point Road Quarry south of S.R. 116).

    - 100% south of the Landfill (via Mecham Road to Stony Point Road with U.S. 101 freeway access via the Pepper Road interchange for southbound freeway traffic and the West Railroad interchange for northbound freeway traffic -- or -- via Mecham Road to Pepper Road with U.S. 101 freeway access via the Pepper Road interchange for southbound freeway traffic and the West Railroad interchange for northbound freeway traffic)

IV. EXISTING TRAFFIC CONDITIONS

A. ROADWAYS

The Sonoma County Central Landfill is located on the west side of Mecham Road about one and a quarter miles southwest of the Mecham Road/Stony Point Road intersection. Local area roadways that would be likely to serve traffic from either project component are Mecham Road, Stony Point Road, Pepper Road and West Railroad Avenue (see Figure 1). Each is briefly described below.

Mecham Road has two 12-foot travel lanes and 8-foot paved shoulders for its entire two-mile length from Stony Point Road to Pepper Road. The posted speed limit is 40 miles per hour. It is stop sign controlled on its "Tee" intersection approaches to both roadways. Pavement condition is average to good from Stony Point Road to the Central Landfill access road (the segment with the highest truck volumes) and is good from the Landfill access to Pepper Road. A few driveways serving farms/residences line the roadway's sometimes straight and level and sometimes curving and rolling alignment. A right-turn deceleration lane is provided on the southwestbound approach to the Central Landfill.

Stony Point Road is a north-south arterial roadway running parallel to and west of the U.S. 101 freeway in central Sonoma County. In the vicinity of the project site, it has two travel lanes with wide, paved shoulders north of Mecham Road (to S.R. 116) and narrow to no paved shoulders south of Mecham Road. Pavement condition is good north of Mecham Road and poor to the south of Mecham Road. Observed vehicle speeds at the Mecham Road intersection ranged from 50 to more than 60 miles per hour. Left-turn deceleration lanes are provided on the approaches to Mecham Road and Roblar Road, but not Pepper Road. A right-turn deceleration lane is also provided on the southbound approach to Mecham Road.

Pepper Road has two, well-paved, 12-foot wide travel lanes and 2-foot paved shoulders from Mecham Road to Stony Point Road. The roadway is lined by infrequent driveways serving farms and residences. Observed vehicle speeds ranged from 45 to more than 60 miles per hour. Pepper Road is stop sign controlled on its eastbound approach to Stony Point Road. The fourth (east) leg of this intersection is a one-way southbound on-ramp to the U.S. 101 freeway.

West Railroad Avenue has two well-paved travel lanes between Stony Point Road and the U.S. 101 northbound off-ramp.

B. VOLUMES

Directional daily traffic counts were conducted by County Public Works in March, 1994 at select locations on Mecham Road, Pepper Road and Stony Point Road. AM peak period turn movement counts were also conducted by County Public Works at the Stony Point/Roblar, Stony Point/Mecham, Stony Point/Pepper, Mecham/Pepper and Mecham/Central Landfill intersections during the same time period. The Central Landfill site is open and has a significant amount of traffic activity during the ambient AM peak traffic period on the local roadway system. However, since it closes at 4:00 PM, it does not contribute traffic to the local circulation system during the evening commute time period. Therefore, only AM peak traffic conditions have been analyzed for this report. Figure 2 presents AM peak hour (7:00-8:00) turn movement count results at local intersections, while daily count results are presented in the Technical Appendix. Overall, Mecham Road just west of Stony Point Road now has a daily two-way traffic volume of about 4,320 vehicles and an AM peak hour two-way volume of about 320 vehicles. AM peak hour traffic is comprised of 15 percent trucks.

C. INTERSECTION OPERATION

Level of Service Methodology

Unsignalized Intersections. Unsignalized intersection operation is typically graded using the Level of Service A through F scale. LOS ratings for all-way stop intersections are determined using a methodology outlined in Transportation Research Board (TRB) Circular 373. Under this methodology, all-way stop intersections receive one LOS designation reflecting operation of the entire intersection. Delay values are also calculated. Intersections with side streets only stop sign controlled are also evaluated using an LOS scale and delay using a new methodology about to be adopted by the Transportation Research Board. However, unlike signalized or all-way stop analysis where the LOS designations pertain to the entire intersection, in side street stop sign controlled analysis LOS and delay designations are also computed for individual turn and through movements. Appendix A summarizes level of service definitions for unsignalized intersections.

Six unsignalized intersections were requested for analysis by County staff:

Stony Point Road/Mecham Road
Stony Point Road/Roblar Road
Stony Point Road/Pepper Road-U.S. 101 Southbound On-Ramp
Mecham Road/Pepper Road
Mecham Road/Central Landfill Access
West Railroad Avenue/U.S. 101 Northbound Off-Ramp

Table 1 shows that currently, during the AM peak traffic hour on local roadways (7:00-8:00) all intersections are operating at good levels of service (LOS A or B) with acceptable delay for all stop sign controlled turn movements. Worksheets are included in the Technical Appendix.

The County of Sonoma considers LOS C operation to be the poorest acceptable for all intersections.

D. INTERSECTION SIGNALIZATION NEEDS

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

There are 11 possible tests for determining if a traffic signal is warranted. These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. Usually, two or more warrants must be met before a signal is installed. In this report, the test for Peak Hour Volumes (Warrant #11) has been applied. When Warrant 11 is met there is a strong indication that a detailed signal warrant analysis covering all possible warrants is appropriate. These rigorous analyses are described in Appendix D of the Caltrans Traffic Manual while Warrant 11 is presented in Appendix A of this report.

Currently, none of the analyzed intersections have volume levels approaching rural peak hour signal warrant criteria levels.

E. ROADWAY OPERATION

Capacities of local roadways were determined using the "Midroads" methodology, previously developed for Sonoma County.[1] The Midroads methodology produces a directional hourly capacity for each individual roadway segment based upon several characteristics. They are: existing total volumes; the percentage of buses and trucks in the vehicle mix; lane and shoulder widths; the frequency of driveways, on-street parking and turn lanes; pavement condition; and general terrain characteristics (i.e., flat and straight versus curving and hilly alignment). The "Midroads" analysis methodology, based upon data in the 1985 Highway Capacity Manual, is presented in Appendix A.

Roadway capacity is graded based upon a scale called "Level of Service" (LOS). The Level of Service scale ranges from Level A, indicating free flow, low volumes and no or minimal platoons of vehicles down to Level F, indicating long queues of vehicles and frequent stop and go traffic. Sonoma County uses LOS C operation as the poorest acceptable on County roadways.[2]

Six roadway locations were selected for analysis by County staff:

Stony Point Road north of Roblar Road
Stony Point Road north of Mecham Road
Stony Point Road south of Mecham Road
Pepper Road west of Stony Point Road
Mecham Road between Stony Point Road and the Central Landfill Access
Mecham Road between the Central Landfill Access and Pepper Road

Table 2 shows that all roadways are now operating at good levels of service (LOS A) during the AM peak traffic hour.

F. PLANNED IMPROVEMENTS

The following improvements are planned for the roadways providing access to the Central Landfill:[3]

- Stony Point Road (north of S.R. 116): Widening/realignment now underway. New signal to be provided at Stony Point Road/S.R. 116. To be completed by winter, 1995/1996.
- Stony Point Road (West Railroad Avenue to Pepper Road): Lane widening and provision of paved shoulders (similar to the existing section north of Roblar Road). To be completed by summer, 1995.
- Stony Point Road (Mecham Road to West Railroad Avenue): Lane widening and provision of paved shoulders (similar to the existing section north of Roblar Road). No fixed schedule – after 1995.

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[1]Requested by County Public Works Department.

[2]Poorer levels of service may also be acceptable at specific locations for short time periods (County General Plan - Objective CT-2.1).

[3]Mr. Dave Wallace, Sonoma County Public Works.

G. INTERSECTION SIGHT LINES

An evaluation was conducted by a Crane Transportation Group registered traffic engineer of the sight lines available for vehicles turning from the stop sign controlled approaches at the intersections listed in section IV-C. Table 3 shows that existing sight lines for turn movements are at borderline acceptable conditions at two locations, based upon 1990 American Association of State Highway and Transportation Officials guidelines.

- Pepper Road eastbound approach to Stony Point Road (to the north, due to vegetation and topography). The uphill grade of Pepper Road on its eastbound approach to Stony Point Road produces slower than average acceleration through this intersection for trucks, which further compounds the safety concern due to the borderline acceptable sight lines.

- U.S. 101 Off-Ramp northbound approach to West Railroad Avenue (to the west due to the freeway bridge abutment).

Surveys conducted by County Public Works staff at the Central Landfill driveway connection to Mecham Road indicate that it takes from 5 to 10 seconds for a truck turning left out of the landfill to fully clear the southbound travel lane on Mecham Road. Due to the relatively low volumes on Mecham Road, it is expected that the longer observed turn movement times could be reduced closer to the 5-second mark if required by heavier traffic volumes (and fewer gaps) on the main travel route.

H. ACCIDENT HISTORY

Table 4 presents a summary of the accidents recorded over the past three years at the intersections analyzed as part of this study. As can be seen, the Stony Point Road/Pepper Road-U.S. 101 Southbound On-Ramp intersection had the highest number of accidents of any study intersection for 1991, 1992, and 1993. Only two accidents at this location, however, may potentially have been due to the borderline sight line conditions. Of the 22 accidents reported at all of the intersections over the past three years, 6 (or 27%) involved trucks. There were not a high enough number of accidents at any location (that would have been potentially preventable with provision of signals) to meet the accident warrant for provision of signals.

V. EXISTING-PLUS-PROJECT TRAFFIC CONDITIONS

B. INTERSECTION LEVEL OF SERVICE IMPACTS

1. HHW Traffic Only

Table 1 shows that the increased traffic on the day of greatest trip generation due to the proposed HHW facility would produce minimal impacts on AM peak hour operation at all major intersections in the vicinity of the landfill. Average vehicle delay for stop sign controlled turn movements would show no measurable increase at any location. AM peak hour operating conditions at all intersections would remain LOS A.

2. Quarry Truck Traffic Only

Alternative 1 (shown in Table 1 as Scenarios A, B, D and E)

Table 1 shows that neither a 6 nor a 12 truck round-trip per hour activity level would produce significant intersection impacts, regardless of whether all trucks were distributed 100% to/from the north on Stony Point Road or were distributed 50% north/50% south on Stony Point Road. Average vehicle delay for stop sign controlled turn movements would increase by no more than 2 seconds at any location. AM peak hour operating conditions at all intersections would remain at existing LOS A or B levels with the exception of Stony Point Road at Pepper Road, where the stop sign controlled eastbound through movement from Pepper Road to the U.S. 101 southbound on-ramp would change from LOS A to a still acceptable LOS B with the addition of 6 quarry trucks to the southbound Stony Point Road left turn.

Alternative 2 (shown in Table 1 as Scenarios A, B and C)

A 6-truck per hour activity level would not produce any significant intersection level of service impacts, regardless of whether all trucks were distributed 100% to/from the north on Stony Point Road or 100% to/from the south (via either Stony Point Road or Pepper Road). Average vehicle delay for stop sign controlled turn movements would increase by no more than 2 seconds at any location. AM peak hour operating conditions at all intersections would remain at existing LOS A or B levels with the exception of Stony Point Road at Pepper Road, where the stop sign controlled eastbound through movement from Pepper Road to the U.S. 101 southbound on-ramp would change from LOS A to a still acceptable LOS B with the addition of 6 quarry trucks to either the southbound Stony Point Road left turn, or to the Pepper Road eastbound through movement.

3. HHW and Quarry Truck Traffic Combined

Analysis has been conducted to determine the AM peak hour impacts from combining peak day HHW traffic with that from quarrying operations. A 12-truck per hour round-trip activity level (split 50% north and 50% south on Stony Point Road) was assumed for quarrying activity. Table 1 shows that combined HHW/quarrying truck traffic activity would produce no significant intersection impacts. Average vehicle delay for stop sign controlled turn movements would increase by no more than 2 seconds at any location. AM peak hour operating conditions would remain at existing LOS A or B levels with the exception of the stop sign controlled eastbound through movement from Pepper Road at Stony Point Road to the U.S. 101 southbound on-ramp, which would change from LOS A to LOS B.

C. SIGNAL WARRANT IMPACTS

Neither HHW nor quarry truck traffic alone, nor HHW and quarry truck traffic combined would produce AM peak hour volumes close to meeting rural peak hour signal warrant criteria levels at any analyzed intersection.

D. ROADWAY OPERATION IMPACTS

Table 2 shows that neither HHW nor quarry truck traffic alone (with either quarry Alternative 1 or 2), nor HHW and quarry truck traffic combined would produce significant impacts to roadway operating conditions. AM peak hour operation would remain LOS A at all analyzed locations on Stony Point Road, Mecham Road and Pepper Road regardless of the combination of HHW and quarry truck traffic.

E. IMPACTS AT INTERSECTIONS WITH RESTRICTED SIGHT LINES

1. Stony Point Road/Pepper Road

The Alternative 2 quarrying alternative could potentially add 6 trucks per hour to the eastbound Pepper Road stop sign controlled intersection approach. The borderline acceptable sight line to the north for turn or through movements for traffic on this approach, combined with the very slow truck acceleration (with a fully loaded gravel truck on an uphill grade) would produce safety concerns for both Stony Point Road traffic as well as for the quarry trucks.

2. West Railroad Avenue/U.S. 101 Northbound Off-Ramp

Both the HHW operation and any quarrying operation with truck travel to/from south of the Central Landfill would add traffic to the stop sign controlled off-ramp left turn movement. The borderline acceptable sight line to the west along West Railroad Avenue, combined with the increased turn volumes, particularly slowly accelerating quarry trucks, would produce safety concerns.

F. OTHER SAFETY/MAINTENANCE CONCERNS

- HHW and quarry truck traffic traveling to the south from the landfill and making a left turn from Stony Point Road to the U.S. 101 on-ramp at Pepper Road would increase the need for provision of a left turn lane on the southbound Stony Point Road intersection approach. This lane should be provided as part of the planned 1995 reconstruction of this section of Stony Point Road.

- Quarry trucks traveling from the south on U.S. 101 required to access the landfill using Pepper Road (via the U.S. 101 northbound off ramp-West Railroad Avenue-Stony Point Road) would not be able to make safe southbound Stony Point Road to westbound Pepper Road turn movements due to the short curve radius in the northwest corner of the intersection. Turning trucks would be required to swing into the opposite direction travel lane.

- Quarry truck traffic traveling to/from the south on Stony Point Road south of Mecham Road would further degrade the already poor pavement condition until proposed/planned reconstruction of this section of Stony Point Road is complete.

- Quarry truck traffic would increase degradation of the existing Mecham Road "average" pavement condition between Stony Point Road and the Central Landfill entrance.

V. CUMULATIVE TRAFFIC IMPACTS

Year 2000 AM peak hour traffic volumes were projected for the roadways and intersections providing access to the Central Landfill site using data supplied from the County's recently completed CMP traffic model. While this model only predicts PM peak hour volumes, the same existing to future percent change interrelationship between PM peak hour volumes was utilized to increase existing AM peak hour volumes to a representative year 2000 condition. Combined HHW and quarry truck traffic (12 round trips per hour - 50/50 directional split) was then added to the year 2000 ambient volumes for testing purposes (see Figure 6).

Table 1 shows that turn and through movements at all analyzed intersections would be operating acceptably at LOS A or LOS B conditions during the year 2000 AM peak traffic hour with ambient plus HHW and quarry truck traffic. Both the Stony Point Road/Roblar Road and Stony Point Road/Mecham Road intersections would have AM peak hour volumes on the borderline of meeting peak hour signal warrant criteria levels. Table 2 shows that all analyzed roadway segments along Stony Point Road, Mecham Road and Pepper Road would be operating acceptably at LOS A conditions with ambient plus HHW and quarry truck traffic. Cumulative traffic increases would, however, further aggravate those safety concerns listed for existing conditions resulting from borderline sight lines at the Stony Point Road/Pepper Road and West Railroad Avenue/U.S. 101 Northbound Off-Ramp intersections.

VI. RECOMMENDATIONS

A. EXISTING CONDITIONS

1. Consideration should be given to: either removing trees/brush along the west side of Stony Point Road north of Pepper Road in order to improve sight lines -or- making this intersection an all-way stop (even though volumes do not meet all-way stop warrant criteria levels) -or- posting 45 mile per hour advisory speed signs on both Stony Point Road intersection approaches.

2. Consideration should be given to: making the West Railroad Avenue/U.S. 101 Northbound Off-Ramp intersection an all-way stop, even though volumes do not meet all-way stop warrant criteria levels -or- posting 40 mile per hour advisory speed signs on both West Railroad Avenue intersection approaches.

The County and/or the County and Caltrans are currently investigating solutions to concerns at these two locations.

B. PROJECT CONDITIONS

1. HHW Traffic

- No improvements or restrictions are required.

2. Quarry Traffic

- No quarry trucks should be routed via Pepper Road in order to minimize potential truck turn and through movements at the Pepper Road/Stony Point Road intersection.

C. YEAR 2000 CONDITIONS

1. Signals should be provided, when warranted, at the Stony Point Road/Roblar Road and Stony Point Road/Mecham Road intersections.

2. Mecham Road should be repaved, when needed.

TABLE 1

INTERSECTION LEVEL OF SERVICE
AM PEAK HOUR

Intersection	Existing (1994)	Existing + HHW Only	Existing + Quarrying Operation Only					Existing + Quarrying (Scenario E) + HHW	Year 2000 + Quarrying (Scenario E) + HHW
			SCENARIO						
			A	B	C	D	E		
Stony Point Rd/Roblar Rd									
Eastbound Left	B - 6[1]	B - 6	B - 7	B - 6	B - 6	B - 8	B - 7	B - 8	B - 9
Eastbound Right	A - 3	A - 3	A - 4	A - 3	A - 3	A - 4	A - 4	A - 4	A - 4
Northbound Left	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3
Int. Average Stopped Delay	.9 SEC	.9 SEC	1.1 SEC	.9 SEC	.9 SEC	1.1 SEC	1.1 SEC	1.1 SEC	1.1 SEC
Stony Point Rd/Mecham Rd									
Eastbound Left	B - 7	B - 7	B - 7	B - 7	B - 7	B - 8	B - 7	B - 7	C - 18
Eastbound Right	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4
Northbound Left	A - 2	A - 2	A - 3	A - 3	A - 2	A - 3	A - 3	A - 3	A - 3
Int. Average Stopped Delay	1.5 SEC	1.5 SEC	1.7 SEC	1.7 SEC	1.5 SEC	1.9 SEC	1.8 SEC	1.9 SEC	4.5 SEC
Stony Point Rd/Pepper Rd									
Eastbound Through	A - 4	A - 4	A - 4	B - 6	B - 6	A - 4	B - 6	B - 6	B - 8
Eastbound Right	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 3
Northbound Left	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 3
Southbound Left	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 4
Int. Average Stopped Delay	1.4 SEC	1.4 SEC	1.4 SEC	1.6 SEC	1.8 SEC	1.4 SEC	1.6 SEC	1.6 SEC	1.9 SEC
Mecham Rd/Pepper Rd									
Southbound Left	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	B - 6
Southbound Right	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 3	A - 4
Eastbound Left	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 4
Int. Average Stopped Delay	1.9 SEC	1.9 SEC	1.9 SEC	1.9 SEC	2.1 SEC	1.9 SEC	1.9 SEC	1.9 SEC	2.6 SEC
Mecham Rd/Landfill Rd									
Eastbound Left	A - 3	A - 3	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	B - 6
Eastbound Right	A - 3	A - 3	A - 3	A - 3	A - 4	A - 4	A - 4	A - 4	A - 4
Northbound Left	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2
Int. Average Stopped Delay	.8 SEC	.8 SEC	1.2 SEC	1.2 SEC	1.4 SEC	1.4 SEC	1.4 SEC	1.4 SEC	1.4 SEC
Railroad Ave/NB 101 Off-Ramp									
Northbound Left	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A - 4	A/B - 5
Northbound Right	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2	A - 2
Int. Average Stopped Delay	.6 SEC	.6 SEC	.6 SEC	1 SEC	1 SEC	.6 SEC	1 SEC	1 SEC	2.1 SEC

Scenario A: Existing + Alternative 1 or 2 - 6 trucks in/out - 100% north
Scenario B: Existing + Alternative 1 or 2 - 6 trucks in/out - 100% south not via Pepper Road
Scenario C: Existing + Alternative 2 - 6 trucks in/out - 100% south using Pepper Road
Scenario D: Existing + Alternative 1 - 12 trucks in/out - 100% north
Scenario E: Existing + Alternative 1 - 12 trucks in/out - 50% north, 50% south

[1]A - 3 Level of Service - Average vehicle delay in seconds for stop sign controlled movements

Source: Crane Transportation Group

TABLE 2

ROADWAY LEVEL OF SERVICE
AM PEAK HOUR

Roadway	Existing (1994)	Existing + HHW Only	Existing + Quarrying Operation Only					Existing + Quarrying (Scenario E) + HHW	Year 2000 + Quarrying (Scenario E) + HHW
			SCENARIO						
			A	B	C	D	E		
Stony Point Road North of Roblar Road									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	436	440	442	436	436	448	442	446	540
Peak Direction	SB	SB	SB	SB	SB	SB	SB	SB	NB
Stony Point Road North of Mecham									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	544	548	550	544	544	556	550	554	605
Direction	SB	SB	SB	SB	SB	SB	SB	SB	SB
Stony Point Road South of Mecham									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	394	397	394	400	394	394	400	403	468
Direction	SB	SB	SB	SB	SB	SB	SB	SB	SB
Pepper Road West of Stony Point Road									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	112	112	112	112	118	112	112	112	150
Direction	EB	EB	EB	EB	EB	EB	EB	EB	EB
Mecham Road North of Pepper Road									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	142	142	142	142	148	142	142	142	205
Direction	SB	SB	SB	SB	SB	SB	SB	SB	NB
Mecham Road North of Landfill									
Level of Service	A	A	A	A	A	A	A	A	A
Peak Direction Volume	203	209	209	215	209	215	215	221	255
Direction	SB	SB	SB	SB	SB	SB	SB	SB	NB

Scenario A: Existing + Alternative 1 or 2 - 6 trucks in/out - 100% north
Scenario B: Existing + Alternative 1 or 2 - 6 trucks in/out - 100% south not via Pepper Road
Scenario C: Existing + Alternative 2 - 6 trucks in/out - 100% south using Pepper Road
Scenario D: Existing + Alternative 1 - 12 trucks in/out - 100% north
Scenario E: Existing + Alternative 1 - 12 trucks in/out - 50% north, 50% south

SB = Southbound NB = Northbound WB = Westbound EB = Eastbound

Source: Crane Transportation Group/Sonoma County Public Works Machine Traffic Counts

TABLE 3

AVAILABLE AND REQUIRED SIGHT LINES
AT STUDY INTERSECTIONS

STOP SIGN CONTROLLED INTERSECTION APPROACH	AVAILABLE[1] SIGHT LINES	AVERAGE PREVAILING VEHICLE SPEEDS	REQUIRED SIGHT LINES BASED UPON PREVAILING SPEED[2]	SIGHT LINE DEFICIENCY BASED UPON PREVAILING SPEEDS
Roblar Road EB at Stony Point Road	North 1100 ft. South 800 ft.	55 55	450-550 ft. 450-550 ft.	No No
Mecham Road EB at Stony Point Road	North 700 ft. South 2900 ft.	55 55	450-500 ft. 450-550 ft.	No No
Pepper Road EB at Stony Point Road	North 400 ft. South 500 ft.	50 50	400-475 ft. 400-475 ft.	Borderline No
Mecham Road SB at Pepper Road	East 800 ft. West 1600 ft.	55 55	450-550 ft. 450-550 ft.	No No
Central Landfill Access EB at Mecham Road	East 550 ft. West 650 ft.	45 40	325-400 ft. 275-325 ft.	No No
U.S. 101 Off-Ramp NB at West Railroad Avenue	East 700 ft. West 350 ft.	45 45	325-400 ft. 325-400 ft.	No Borderline

Source: Crane Transportation Group

[1]Sight lines as measured from an auto. Sight lines would be the same to much greater from a truck cab, due to the improved visibility afforded by the height of the cab.

[2]Stopping Sight Distance - A Policy on Geometric Design of Highways and Streets, 1990. American Association of State Highway and Transportation Officials.

TABLE 4

ACCIDENT HISTORY
INTERSECTIONS SERVING CENTRAL LANDFILL

LOCATION	NUMBER OF ACCIDENTS		
	1991	1992	1993
Stony Point Road/Roblar Road	0	3	0
Stony Point Road/Mecham Road	1	2 (1)[1]	2
Stony Point Road/Pepper Road	2	4 (1)	3 (1)
Mecham Road/Central Landfill Access	0	1 (1)	1 (1)
Mecham Road/Pepper Road	0	1 (1)	0
West Railroad/U.S. 101 Northbound Off-Ramp	1	0	1

Source: Sonoma County Public Works Department

[1]( ) Number of accidents involving trucks.

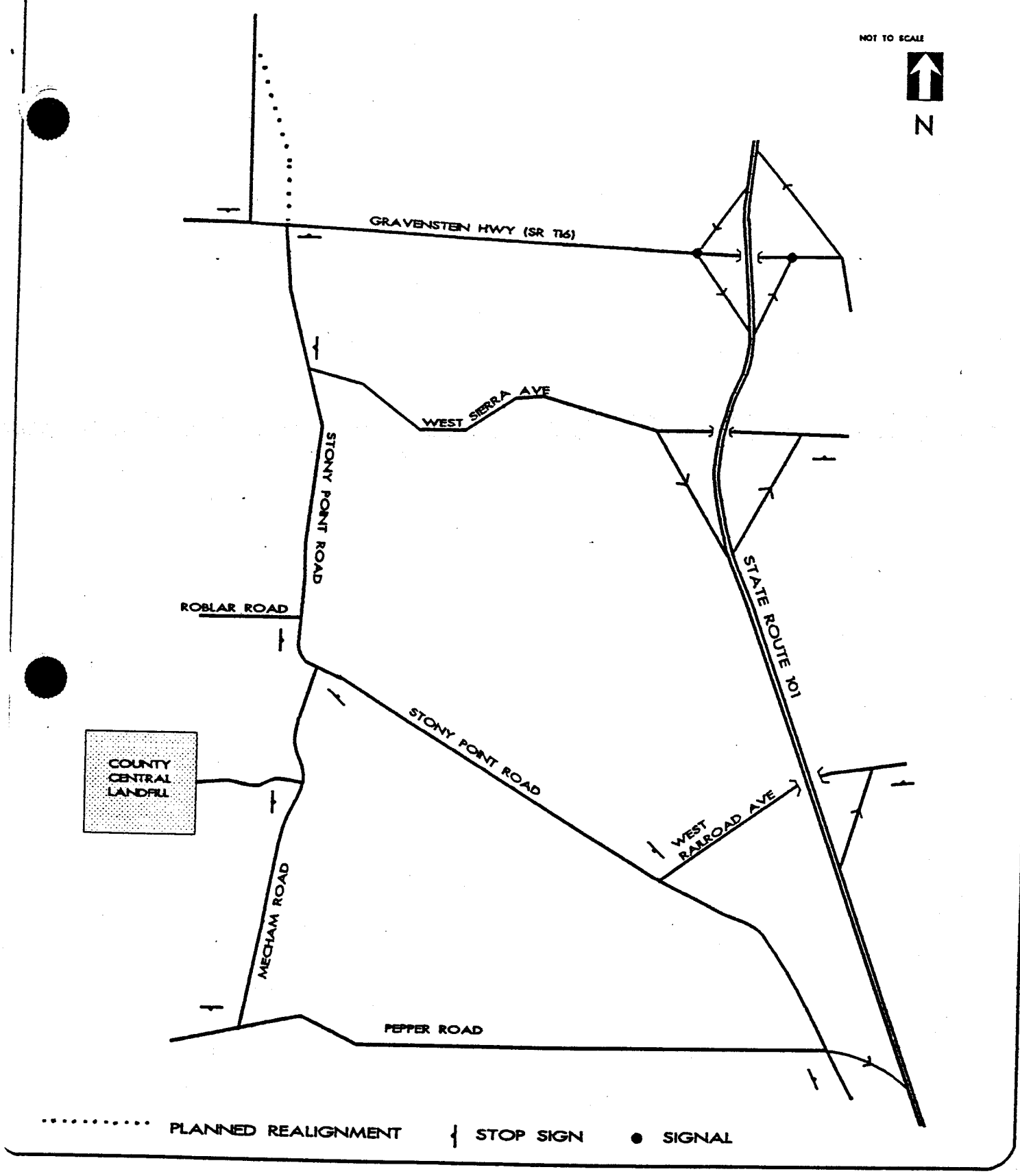


FIGURE 1

AREA MAP

CRANE TRANSPORTATION GROUP

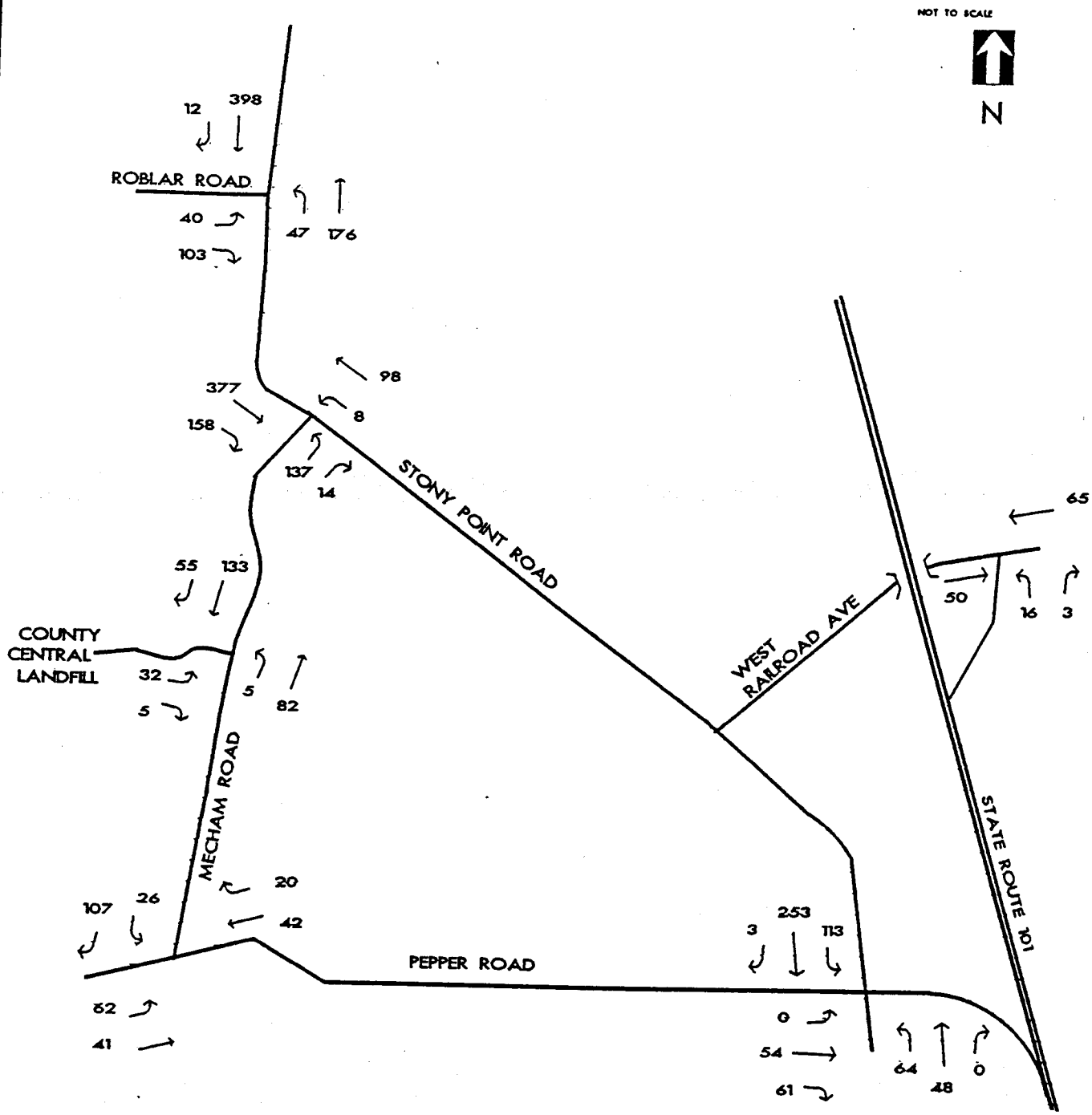
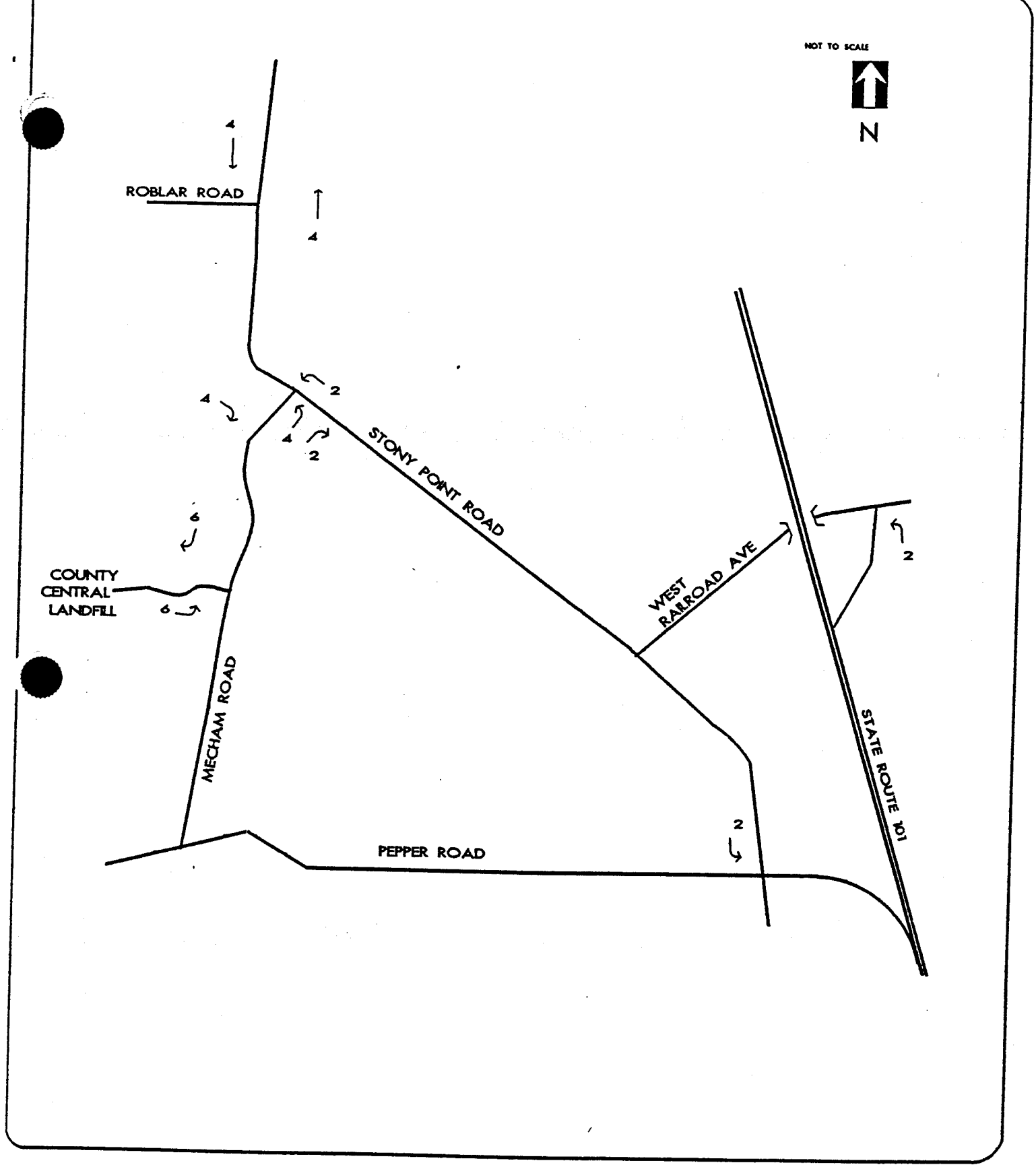


FIGURE 2

CRANE TRANSPORTATION GROUP

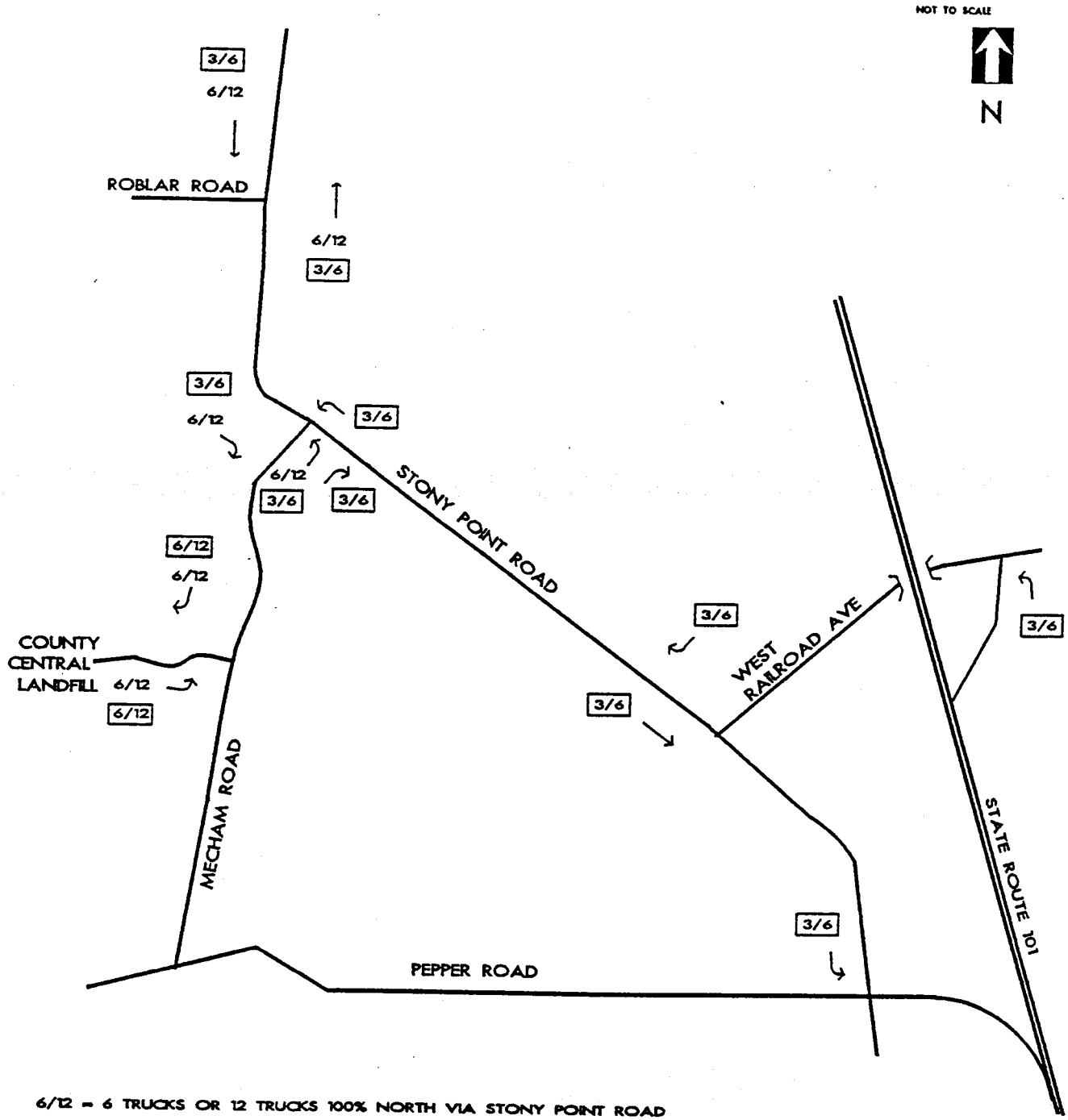
EXISTING AM PEAK HOUR VOLUMES
(7:00 - 8:00 AM)



CRANE TRANSPORTATION GROUP

FIGURE 3

HOUSEHOLD HAZARDOUS WASTE TRAFFIC
(7:00 - 8:00 AM)



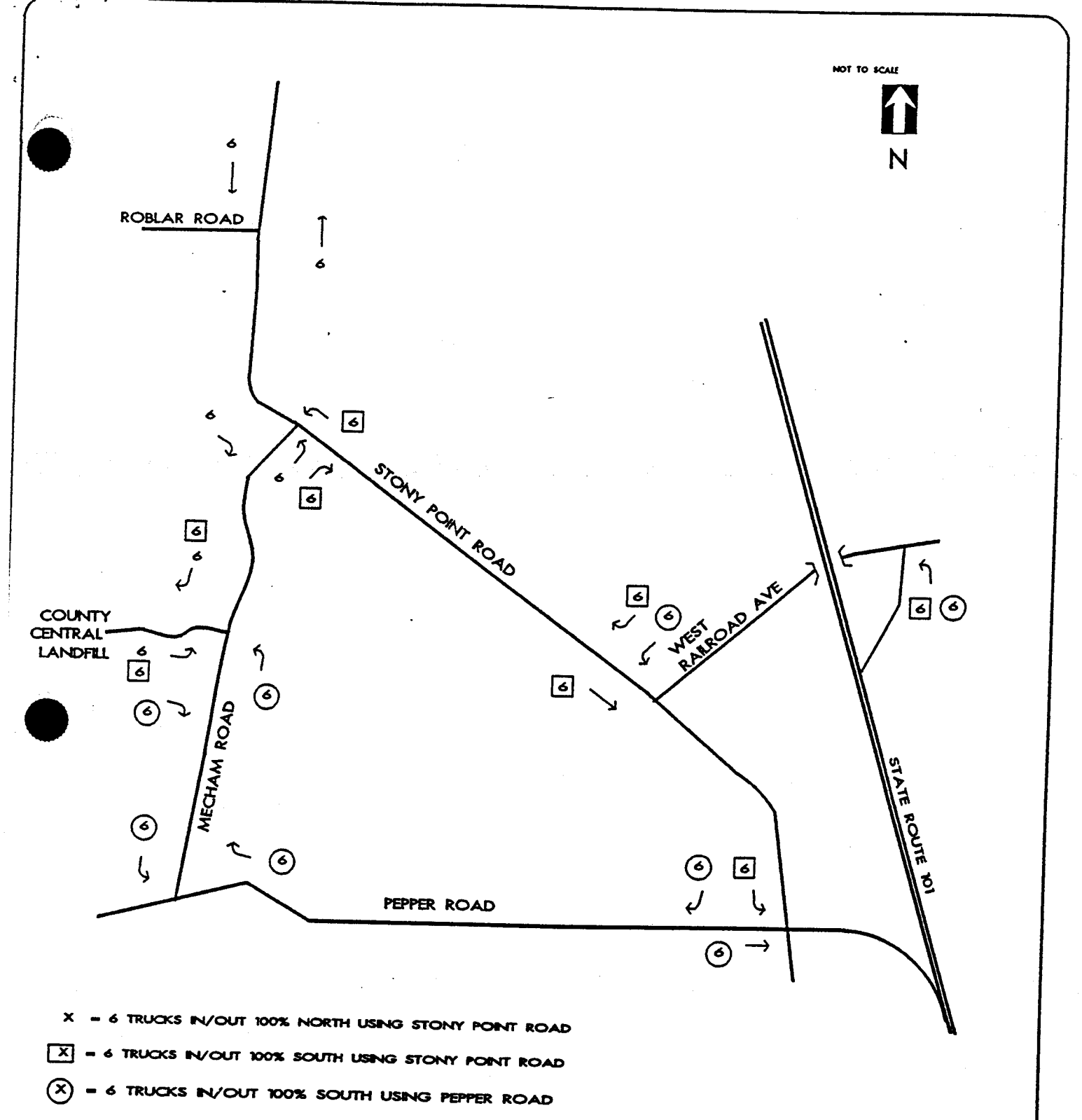
6/12 = 6 TRUCKS OR 12 TRUCKS 100% NORTH VIA STONY POINT ROAD

6/12 = 6/12 TRUCKS IN/OUT 50% NORTH/50% SOUTH VIA STONY POINT ROAD

FIGURE 4

CRANE TRANSPORTATION GROUP

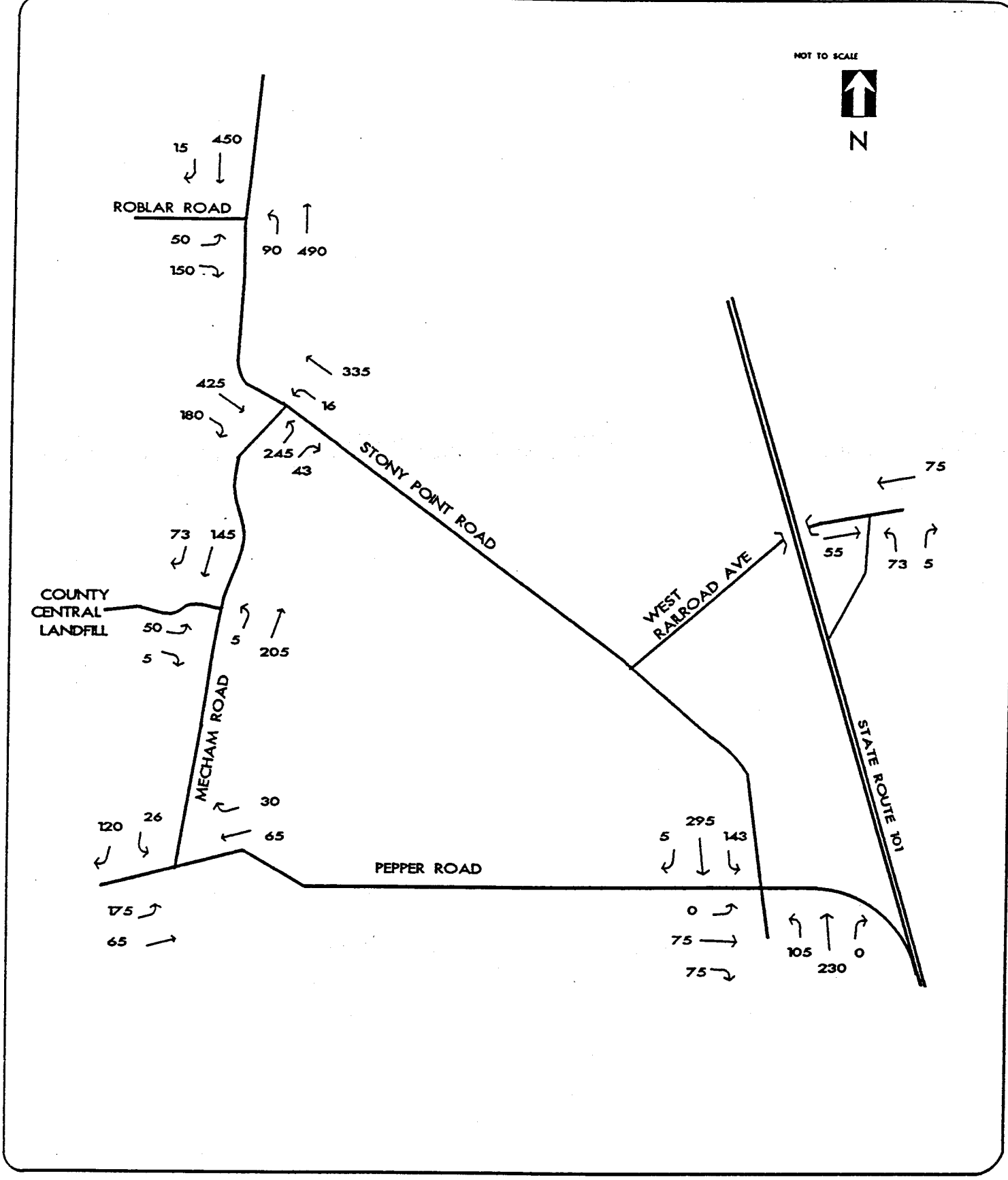
ALTERNATIVE 1 GRAVEL TRUCK TRAFFIC
(7:00 - 8:00 A.M.)



CRANE TRANSPORTATION GROUP

FIGURE 5

ALTERNATIVE 2 GRAVEL TRUCK TRAFFIC
(7:00 - 8:00 A.M.)



CRANE TRANSPORTATION GROUP

FIGURE 6
YEAR 2000 AM PEAK HOUR TRAFFIC VOLUMES
INCLUDES HOUSEHOLD HAZARDOUS WASTE
AND ALTERNATIVE 2 GRAVEL TRUCKS
(12TRUCKS IN/12 TRUCKS OUT)

APPENDIX A

ALL-WAY STOP LEVEL OF SERVICE - AVERAGE DELAY RELATIONSHIP

LOS	AVERAGE STOPPED DELAY, SEC/VEH
A	< 5
B	5-10
C	10-20
D	20-30
E	30-45
F	> 45

Source: TRB, Circular 373

LEVEL OF SERVICE CRITERIA – UNSIGNALIZED INTERSECTIONS

Level of Service	Average Stopped Delay to Minor Street Traffic
A	≤ 5 seconds
B	> 5 and ≤ 10 seconds
C	> 10 and ≤ 20 seconds
D	> 20 and ≤ 30 seconds
E	> 30 and ≤ 45 seconds
F	> 45 seconds

Source: 1985 Highway Capacity Manual

TABLE A

ADJUSTMENT FACTORS FOR WIDTH

Shoulder Width*	Lane Width 12′	11′	10′	9′
6	1.00	0.97	0.91	0.81
4	0.99	0.96	0.90	0.80
2	0.97	0.94	0.88	0.79
0	0.90	0.87	0.82	0.73

TABLE B

ADJUSTMENT FACTORS FOR % TRUCKS/BUSES AND TERRAIN

Percent Trucks/Buses	Terrain Level	Rolling
0 - 2	1.0	0.95
3 - 4	0.96	0.89
5 - 7	0.93	0.83
8 - 10	0.91	0.77
11 - 14	0.88	0.70
15 - 20	0.83	0.63

*Or distance from traffic lane edge to obstruction (ft.). In cases with shoulders which are paved or treated with bituminous materials for a width of 4 feet or more, increase the effective width of adjacent traffic lanes by 1 foot.

CENTRAL DISPOSAL SITE
EMERGENCY ACCESS MAP
500 MECHAM ROAD
REVISED NOV. 1998

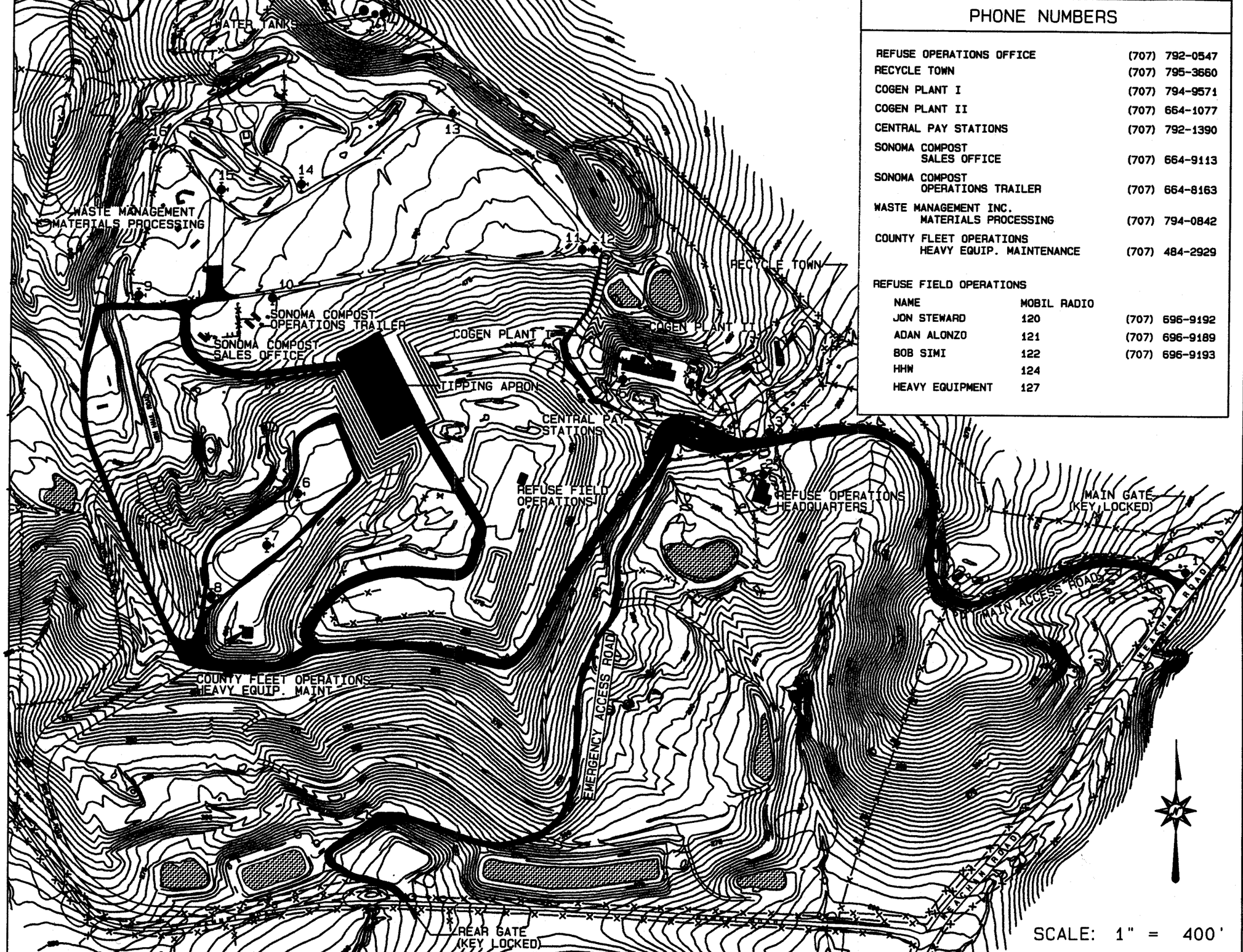
LEGEND

FIRE HYDRANT (AS NOTED IN SCHEDULE)

GATE

FIRE HYDRANT SCHEDULE

NUMBER	TYPE
1	STANDARD FIRE HYDRANT
2	STANDARD FIRE HYDRANT
3	WHARF HYDRANT
4	STANDARD FIRE HYDRANT
5	STANDARD FIRE HYDRANT
6	STANDARD FIRE HYDRANT
7	WHARF HYDRANT
8	STANDARD FIRE HYDRANT
9	STANDARD FIRE HYDRANT
10	STANDARD FIRE HYDRANT
11	WHARF HYDRANT
12	STANDARD FIRE HYDRANT
13	STANDARD FIRE HYDRANT
14	STANDARD FIRE HYDRANT
15	STANDARD FIRE HYDRANT
16	STANDARD FIRE HYDRANT
17	WHARF HYDRANT

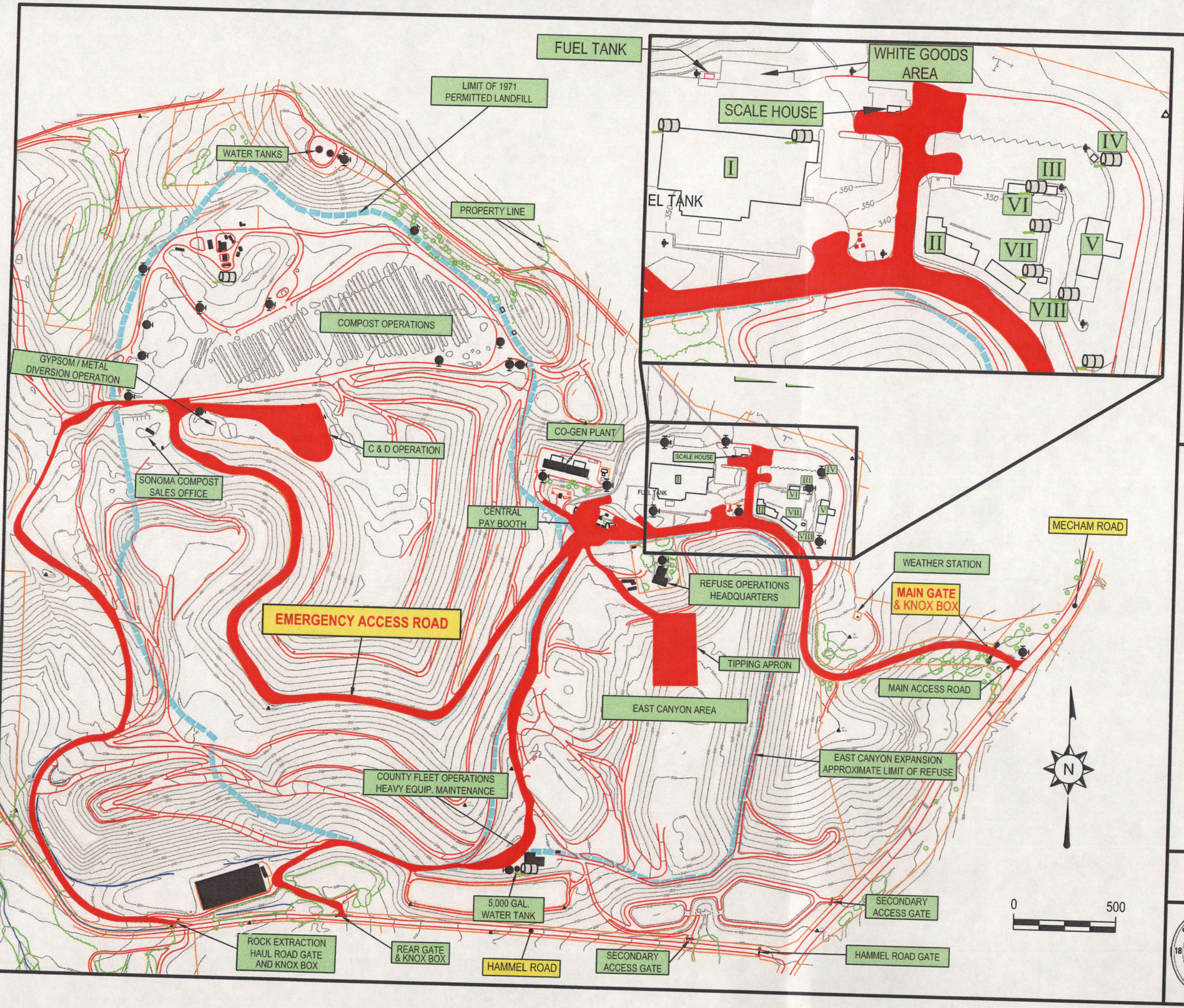


PHONE NUMBERS

REFUSE OPERATIONS OFFICE	(707) 792-0547
RECYCLE TOWN	(707) 795-3660
COGEN PLANT I	(707) 794-9571
COGEN PLANT II	(707) 664-1077
CENTRAL PAY STATIONS	(707) 792-1390
SONOMA COMPOST SALES OFFICE	(707) 664-9113
SONOMA COMPOST OPERATIONS TRAILER	(707) 664-8163
WASTE MANAGEMENT INC. MATERIALS PROCESSING	(707) 794-0842
COUNTY FLEET OPERATIONS HEAVY EQUIP. MAINTENANCE	(707) 484-2929

REFUSE FIELD OPERATIONS

NAME	MOBIL RADIO	
JON STEWARD	120	(707) 696-9192
ADAN ALONZO	121	(707) 696-9189
BOB SIMI	122	(707) 696-9193
HHW	124	
HEAVY EQUIPMENT	127	



EMERGENCY CONTACT LIST

For Immediate Emergency

Call 9-1-1

Central Landfill - Office
500 Mecham Road
Petaluma, CA 94952 (707) 565-7940

Name	*Mobile Radio*	*Cell Phone*
Bob Simi	122	(707) 696-9193
Fred Esposti	121	(707) 953-3608
John DeStefano	123	(707) 479-2974
Tamara Danzart	120	(707) 9696-9192
Don Poindexter	86	(707) 696-9190
Heavy Equipment	127	

EMERGENCY ACCESS ROAD

ONE WAY

LEGEND

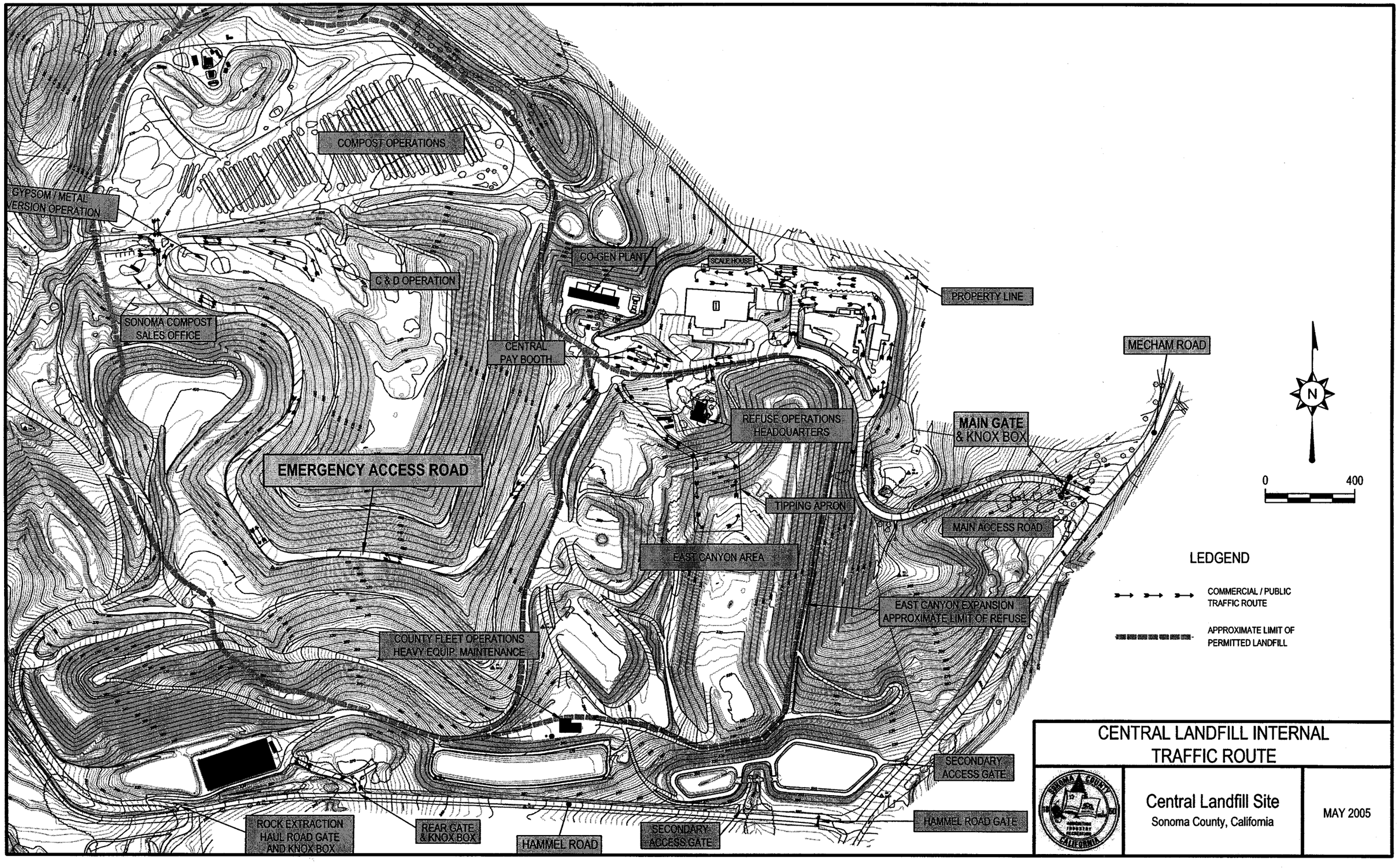
- Standard Fire Hydrant
- Wharf Hydrant
- Spill Kit
- Gate
- Public Tipping Building — I
- Storage Building — II
- Reuse Recycling Office — III
- Attendants Botth — IV
- Household Hazardous Waste Building — V
- Material Storage Building — VI
- Material Storage Building — VII
- Oil Recycling Building — VIII

EMERGENCY ACCESS MAP

Central Landfill Site
Sonoma County, California

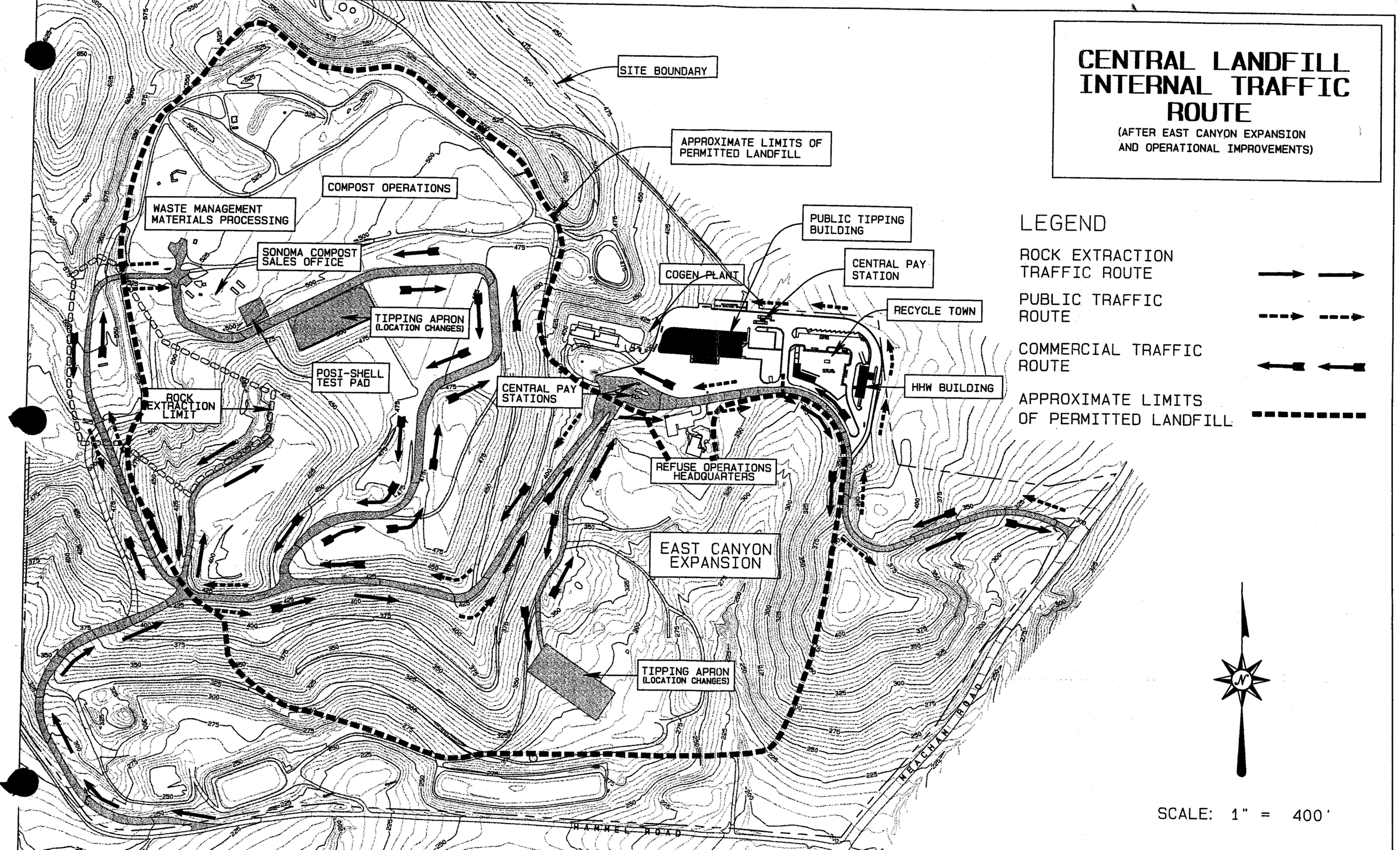
FIGURE 5

May 2005


COMPOST OPERATIONS
GYPSOM / METAL
VERSION OPERATION
C & D OPERATION
SONOMA COMPOST
SALES OFFICE
CO-GEN PLANT
SCALE HOUSE
PROPERTY LINE
CENTRAL
PAY BOOTH
MECHAM ROAD
REFUSE OPERATIONS
HEADQUARTERS
MAIN GATE
& KNOX BOX
EMERGENCY ACCESS ROAD
TIPPING APRON
MAIN ACCESS ROAD
EAST CANYON AREA
EAST CANYON EXPANSION
APPROXIMATE LIMIT OF REFUSE
COUNTY FLEET OPERATIONS
HEAVY EQUIP. MAINTENANCE
SECONDARY
ACCESS GATE
HAMMEL ROAD GATE
ROCK EXTRACTION
HAUL ROAD GATE
AND KNOX BOX
REAR GATE
& KNOX BOX
HAMMEL ROAD
SECONDARY
ACCESS GATE
N
0
400
LEDGEND
COMMERCIAL / PUBLIC
TRAFFIC ROUTE
APPROXIMATE LIMIT OF
PERMITTED LANDFILL
CENTRAL LANDFILL INTERNAL
TRAFFIC ROUTE
SONOMA COUNTY
CALIFORNIA
Central Landfill Site
Sonoma County, California
MAY 2005

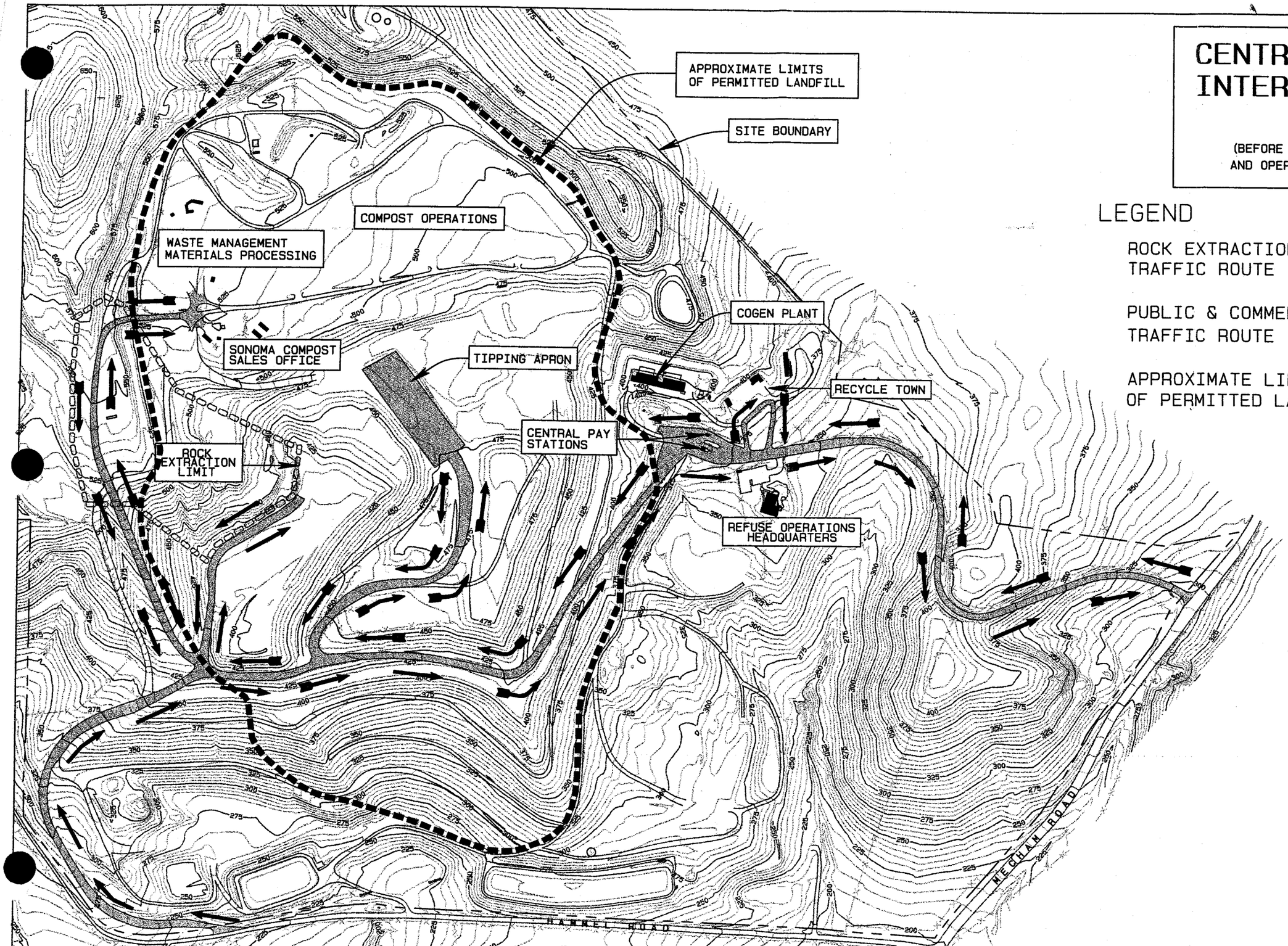
CENTRAL LANDFILL INTERNAL TRAFFIC ROUTE

(AFTER EAST CANYON EXPANSION AND OPERATIONAL IMPROVEMENTS)



CENTRAL LANDFILL INTERNAL TRAFFIC ROUTE

(BEFORE EAST CANYON EXPANSION AND OPERATIONAL IMPROVEMENTS)



LEGEND

ROCK EXTRACTION TRAFFIC ROUTE

PUBLIC & COMMERCIAL TRAFFIC ROUTE

APPROXIMATE LIMITS OF PERMITTED LANDFILL

SCALE: 1" = 400'

APPENDIX A-6

Contingency and Evacuation Plan

SONOMA COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION OPERATIONS HEADQUARTERS

CONTINGENCY PLAN & EVACUATION PLAN
CENTRAL LANDFILL

RESPONSE PLAN FOR EMERGENCIES

CASHIER MUST:

1. IN CASE OF FIRE OR POTENTIAL DISASTER:

   A. DENY FURTHER ENTRY TO THE SITE
   B. INFORM THEIR SUPERVISOR OR MANAGEMENT

2. MAKE AN ASSESSMENT:

   A. WHO DID IT HAPPEN TO
   B. WHAT HAPPENED
   C. WHEN DID IT HAPPEN
   D. WHERE DID IT HAPPEN
   E. HOW DID IT HAPPEN
   F. WAS THERE ANY DAMAGE
   G. IS THERE ANY AID NEEDED

   IF REQUIRED:

   A. IMPLEMENT FIRE PREVENTION PLAN
   B. DIRECT PUBLIC AND TRAFFIC OUT OF EMERGENCY AREA
   C. TRAFFIC IS TO BE DIRECTED IN A SINGLE DIRECTION TO THE NEAREST AND SAFEST EXIT POINT

3. DOCUMENT EVENTS/TIMES AS THEY OCCUR

4. REASSESS SITUATION, IF NEEDED:

   A. CALL 911 IF NECESSARY &/OR CALL REFUSE OPERATIONS FOR FURTHER INSTRUCTIONS

   (1) 911 DEPARTMENTS

   FIRE SFRVICES
   HIGHWAY PATROL/SHERIFF
   AMBULANCE/HOSPITAL

   (2) OFFICE/MANAGEMENT

   RICHARD DOBLE, OPERATIONS MANAGER
   CESAR DATU, ENGINEER TECH III
   JOHN STEWARD, DISPOSAL SUPERVISOR
   DAN GUSTAVSEN, DISPOSAL SUPERVISOR

5. CONTROL EVACUATION OF VEHICLES AND ENTRANCE OF EMERGENCY VEHICLES.

6. OVERALL ASSESSMENT, FOLLOW UP AND FINAL DOCUMENTATION OF THE FIRE/HAZARD/DISASTER.

PROCEDURES FOR FIGHTING A FIRE
(FIRE IN THE PIT OR ON SITE)

1. ISOLATE FIRE/BURNING WASTE FROM ALL OTHER WASTE

2. MOVE FIRE/BURNING WASTE TO A SAFE AREA

3. CALL IN THE WATER TRUCK

4. WET ALL OF THE FIRE/BURNING WASTE AND AREA FOR APPROXIMATELY TEN FEET (10') AROUND THE FIRE/BURNING WASTE

5. GET THE SCRAPER TO HAUL IN DIRT

6. USE CAT TO COVER FIRE/BURNING WASTE WITH DIRT

7. WET DOWN DIRT

8. AS A LAST RESORT, IF FIRE/BURNING WASTE WON'T GO OUT OR WAS TO SPREAD CALL THE FIRE DEPARTMENT

APPENDIX A-7

Site Life Calculations

TAB

CENTRAL DISPOSAL SITE
VOLUME LANDFILLED AND DIVERTED
December 16, 1997

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Waste generation, thousand tons	672	684	696	708	720	733	746	759	772	786	799	812	824	838	851
Diverted, thousand tons	119	187	227	299	297	300	307	339	375	422	431	438	445	452	460
Diverted, percent	18	27	33	42	41	41	41	45	49	54	54	54	54	54	54
Landfilled, thousand tons		497	469	409	423	433	439	420	397	364	368	374	379	386	391
Landfilled, thousand cu yds		828	782	682	705	722	732	700	662	607	613	623	632	643	652
Additional airspace, thousand cu yds									7000						
Volume remaining thousand cu yds							9,028	8,182	14,380	13,641	12,907	12,161	11,404	10,635	9,854
Daily cover thousand cu yds							146	140	132	121	123	125	126	129	130
Volume remaining subracting cover thousand cu yds						9,760	8,882	8,042	14,248	13,520	12,784	12,036	11,278	10,506	9,724

Assumptions

1. Waste generated is derived from SRRE projections using the March 1994 ColWMP (Table C-2) as the reference.
2. Waste landfilled and therefore tonnage diverted through 1997 is derived from fee gate receipts with a projection for the last quarter of 1997
3. Waste diverted for 1998 and beyond is derived from SRRE projections using March 1994 ColWMP (Table C-2) as the reference.
4. Daily & intermediate cover is 20% of fill volume. Landfill density is 1200 lbs per cy.
5. January 1997 site capacity is based on airspace as determined by Final Grading Plan dated October 1997 and the October 6, 1996 aerial topographical map.
6. In 1999 7,000,000 cubic yards capacity is added by permitting of East Canyon Area.

c:\msoffice\excel\darlene\centlife.xls

TABLE 1
CENTRAL DISPOSAL SITE
VOLUME LANDFILLED AND DIVERTED
December 16, 1997

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Waste generation, thousand tons	865	879	893	907	922	937	952	967	982	998	1014	1030
Diverted, thousand tons	467	474	482	490	498	506	514	522	530	539	548	556
Diverted, percent	54	54	54	54	54	54	54	54	54	54	54	54
Landfilled, thousand tons	398	405	411	417	424	431	438	445	452	459	466	474
Landfilled, thousand cu yds	663	675	685	696	707	718	730	741	753	765	777	790
Volume remaining thousand cu yds	9,061	8,253	7,433	6,601	5,755	4,896	4,022	3,135	2,234	1,318	388	(557)
Daily cover thousand cu yds	133	135	137	139	141	144	146	148	151	153	155	158
Volume remaining subracting cover thousand cu yds	8,928	8,118	7,296	6,462	5,614	4,752	3,876	2,987	2,083	1,165	232	(715)

Assumptions

1. Waste generated is derived from SRRE projections using the March 1994 ColWMP (Table C-2) as the reference.
2. Waste landfilled and therefore tonnage diverted through 1997 is derived from fee gate receipts with a projection for the last quarter of 1997
3. Waste diverted for 1998 and beyond is derived from SRRE projections using March 1994 ColWMP (Table C-2) as the reference.
4. Daily & intermediate cover is 20% of fill volume. Landfill density is 1200 lbs per cy.
5. January 1997 site capacity is based on airspace as determined by Final Grading Plan dated October 1997 and the October 6, 1996 aerial topographical map.
6. In 1999 7,000,000 cubic yards capacity is added by permitting of East Canyon Area.

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TABLE 2

CENTRAL DISPOSAL SITE

VOLUME LANDFILLED AND DIVERTED

Including Rock Extraction

December 16, 1997

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Waste generation, thousand tons	672	684	696	708	720	733	746	759	772	786	799	812	824	838	851
Diverted, thousand tons	119	187	227	299	297	300	307	339	375	422	431	438	445	452	460
Diverted, percent	18	27	33	42	41	41	41	45	49	54	54	54	54	54	54
Landfilled, thousand tons		497	469	409	423	433	439	420	397	364	368	374	379	386	391
Landfilled, thousand cu yds		828	782	682	705	722	732	700	662	607	613	623	632	643	652
Additional airspace, thousand cu yds									7000		650				
Volume remaining thousand cu yds							9,028	8,182	14,380	13,641	13,557	12,811	12,054	11,285	10,504
Daily cover thousand cu yds							146	140	132	121	123	125	126	129	130
Volume remaining subracting cover thousand cu yds						9,760	8,882	8,042	14,248	13,520	13,434	12,686	11,928	11,156	10,374

Assumptions

1. Waste generated is derived from SRRE projections using the March 1994 ColWMP (Table C-2) as the reference.
2. Waste landfilled and therefore tonnage diverted through 1997 is derived from fee gate receipts with a projection for the last quarter of 1997
3. Waste diverted for 1998 and beyond is derived from SRRE projections using March 1994 ColWMP (Table C-2) as the reference.
4. Daily & intermediate cover is 20% of fill volume. Landfill density is 1200 lbs per cy.
5. January 1997 site capacity is based on airspace as determined by Final Grading Plan dated October 1997 and the October 6, 1996 aerial topographical map.
6. In 1999 7,000,000 cubic yards capacity is added by permitting of East Canyon Area.
7. In 2001 650,000 cubic yards capacity is added by completion of rock exctraction project.

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TABLE 2
CENTRAL DISPOSAL SITE
VOLUME LANDFILLED AND DIVERTED
Including Rock Extraction
December 16, 1997

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Waste generation, thousand tons	865	879	893	907	922	937	952	967	982	998	1014	1030
Diverted, thousand tons	467	474	482	490	498	506	514	522	530	539	548	556
Diverted, percent	54	54	54	54	54	54	54	54	54	54	54	54
Landfilled, thousand tons	398	405	411	417	424	431	438	445	452	459	466	474
Landfilled, thousand cu yds	663	675	685	696	707	718	730	741	753	765	777	790
Volume remaining thousand cu yds	9,711	8,903	8,083	7,251	6,405	5,546	4,672	3,785	2,884	1,968	1,038	93
Daily cover thousand cu yds	133	135	137	139	141	144	146	148	151	153	155	158
Volume remaining subracting cover thousand cu yds	9,578	8,768	7,946	7,112	6,264	5,402	4,526	3,637	2,733	1,815	882	(65)

Assumptions

1. Waste generated is derived from SRRE projections using the March 1994 ColWMP (Table C-2) as the reference.
2. Waste landfilled and therefore tonnage diverted through 1997 is derived from fee gate receipts with a projection for the last quarter of 1997
3. Waste diverted for 1998 and beyond is derived from SRRE projections using March 1994 ColWMP (Table C-2) as the reference.
4. Daily & intermediate cover is 20% of fill volume. Landfill density is 1200 lbs per cy.
5. January 1997 site capacity is based on airspace as determined by Final Grading Plan dated October 1997 and the October 6, 1996 aerial topographical map.
6. In 1999 7,000,000 cubic yards capacity is added by permitting of East Canyon Area.

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FEBRUARY 1999 TOPOGRAPHY AND
JUNE 1999 FINAL CAP GRADING PLAN
AS PROVIDED BY COUNTY OF SONOMA
ON JUNE 30, 1999.

.SONOMA\ RAL\99data\Cap99.dwg Thu Oct 21 17:18:14 1999

COUNTY OF SONOMA

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
INTEGRATED WASTE DIVISION - OPERATIONS HEADQUARTERS
500 MECHAM ROAD, PETALUMA, CA 94952
PHONE (707) 792-0547, FAX (707) 792-0416

MEMORANDUM

Date: June 30, 1999
To: Terri Kinney, Dave Evans, CRWQCB
From: Don Poindexter, IWD
Subject: Sonoma County Central Landfill Site Life

This is to confirm that the site life projections discussed in the Draft Joint Technical Document were based on outdated aerial surveys and estimates and not yet updated to include the most recent aerial survey and certain final cap redesign work that has been in progress to improve drainage characteristics. The previously planned maximum elevation of 565 feet, Central Datum, has not been changed. The new computations are based on the most recent aerial survey, performed in February 1999, compared to the most recent version of the final cap configuration, as of June 1999. The results are as follows:

Remaining air space:

(excluding the final cap, assumed 3 feet thick) = **6,817,000** cubic yards

Reduction of 20 % for daily and intermediate cover:

6,817,000 x 0.80 = **5,453,600** cubic yards

Conversion to tons: $\frac{5{,}453{,}600 \text{ c.y.} \times 1{,}200 \text{ lbs./c.y.}}{2{,}000 \text{ lbs./ton}}$ = **3,272,160** tons

Site Life at 450,000 tons per year: $\frac{3{,}272{,}160 \text{ tons}}{450{,}000 \text{ t/yr}}$ = **7.27** years

This would correspond to an anticipated closure date of about May 2006. The computations were performed on Spectra Precision Terramodel Version 9.6, Civil View 9.6, DTM Menu (Volume from DTM, Volume Option DTM). Copies of data and a corresponding plan will be included with the final JTD.

If you have any questions or need additional information, please contact me at 792-4958.

c: Ken Wells
Susan Klassen
Jeff Dunn, GeoSyntec

APPENDIX A-8

Permits

APPENDIX H

Regulatory Requirements

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
2550 Ventura Avenue, Santa Rosa, CA 95403-2829
(707) 565-1900 FAX (707) 565-1103

DATE: December 10, 2002

TO: Don Poindexter

FROM: Tim Mayer TM

SUBJECT: Central Landfill Hours of Operation

I reviewed the proposal to amend the permit for Central Disposal Site to allow employees and contractors additional time at the end of the day to conduct daily clean-up tasks. With the amended permit, this work would be allowed to continue until 7:00, although it would normally be done before that time. As I understand the proposal, it would not change the hours of operation for disposal; the landfill will continue to close to the public and haulers at 4:00 pm. The extension of hours would only apply to landfill employees and contractors for covering the active landfill cell and related operations and maintenance.

I do not believe that this would be a significant departure from the project that is currently permitted. The landfill will continue to close its gates by 4:00 pm, so the extension of hours will not affect traffic or traffic noise on the haul routes. The only likely physical change would be noise from the clean up operations extending later in the day. However, noise from clean-up tasks would be less than generated during typical daily operations, and the EIR for the landfill expansion did not identify any significant noise impacts from typical daily operations of the East Canyon landfill. Also, the clean-up operations will be completed by 7:00 pm, which is normally considered to be the beginning of the evening hours in which noise is more objectionable to people.

Given the above, I think the revision would be within the scope of the project already reviewed and approved, and that a subsequent environmental document is not needed.

California Regional Water Quality Control Board

North Coast Region

William A. Hoy, Chairman

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

Internet Address: http://www.swrcb.ca.gov/~rwqcb1
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone 1-877-721-9203 (toll free) or (707) 576-2220 FAX (707) 523-0135

RECEIVED
2000 SEP -7 P 12:50
SONOMA COUNTY DEPT. OF PUBLIC WORKS

September 6, 2000

Susan Klassen
Sonoma County Department
of Transportation and Public Works
575 Administration Drive, # 117A
Santa Rosa, CA 95403

Dear Ms. Klassen:

Subject: Transmittal of Adopted Order No. R1-2000-62 Waste Discharge Requirements and Water Quality Certification; Central Landfill and East Canyon Expansion

File: Sonoma County Central Solid Waste Disposal Site, 500 Mecham Road, Petaluma, CA

This letter transmits the Waste Discharge Requirements and Water Quality Certification for the Central Landfill and East Canyon Expansion. The Regional Water Board adopted these requirements on August 25, 2000, with minor changes.

The Order contains a Compliance Schedule with several submittal dates critical to the proposed project. We have reviewed these dates with you and your staff and look forward to project implementation in compliance with the established schedule for submittals.

Your cooperation with my staff through the permitting process has been appreciated. If we can be of assistance please feel free to contact Terri Kinney of my staff at (707) 576-2668.

Sincerely,

Lee Michlin
Executive Officer

TAK:bp/centwdradoptiontrans

Certified-Return Receipt

Enclosures: Adopted Order No R1-2000-62 Waste Discharge Requirements and Water Quality Certification

cc: Ken Wells, SCPWD, 575 Administration Drive, Room 117 A, Santa Rosa CA 95402
Don Poindexter, Central Landfill, 500 Mecham Road, Petaluma, CA 94952
Tim Mayer, Chris Seppeler, SCPRMD, 2550 Ventura Avenue, Santa Rosa, CA 95403
Bob Swift, Sonoma County Environmental Health Department-LEA, 1030 Center Street, Santa Rosa, CA 95403
Barbara Guggemos, 43 Walmbold Lane, Petaluma CA 94952
William J. Henrich, 39 Walmbold Lane, Petaluma CA 94952
Kim Kiernan, 65 Everett Lane, Petaluma CA 94952
Lynda Hungerford, League of Women Voters, 2420 Coddingtown Center, Santa Rosa, CA 95401
Don Sanders, Sierra Club Sonoma Group, P.O. Box 466, Santa Rosa, CA 95402-466
City of Santa Rosa, Miles Ferris, 69 Stony Circle, Santa Rosa, CA 95401

California Regional Water Quality Control Board

North Coast Region

William A. Hoy, Chairman

inston H. Hickox
Secretary for Environmental Protection

Gray D
Gover

Internet Address: http://www.swrcb.ca.gov/~rwqcb1/
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone 1-877-721-9203 (toll free) or (707) 576-2220 FAX (707) 523-0135

September 6, 2000

NOTICE OF ADOPTION

of

WASTE DISCHARGE REQUIREMENTS
AND
WATER QUALITY CERTIFICATION

ORDER NO. R1-2000-62

I.D. Nos. 1B80149OSON
and
1B99011RSON

SONOMA COUNTY CENTRAL DISPOSAL SITE
AND
EAST CANYON EXPANSION UNIT
CLASS III WASTE MANAGEMENT UNITS

Sonoma County

Waste Discharge Requirements and Water Quality Certification for the above named discharger were adopted by the California Regional Water Quality Control Board, North Coast Region on August 25, 2000. The Order was adopted with minor changes.

Lee Michlin
Executive Officer

TAK:bp/centwdragencyadoptletter

cc: SWRCB, Division of Clean Water Programs, Attn: Liz Haven, Lisa Babcock
SWRCB, Office of the Chief Counsel, Attn: Phil Wyels, Yuri Won
Sonoma County Environmental Health Department, Jeff Lewin, Bob Swift (notice only)
Sonoma County Permit and Resource Management Department, Tim Mayer, Chris Seppeler (notice only)

CWIMB, Sacramento, Attn: Mark deBie, Mary Coyle
CIWMB, Sacramento, Attn: Tim Crist, Beatrice Poroli
SWRCB, Division of Water Quality, Attn: John Youngerman
SWRCB, Division of Clean Water Programs, Office of Water Recycling
U.S. Army Corps of Engineers, San Francisco, Attn: Regulatory Functions, Richard Flynn, Jane Hicks
DFG, Sacramento
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DOHS, Office of Drinking Water, Santa Rosa, Attn: Bruce Burton
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Dept. Parks and Recreation, Sacramento, Attn: Office Chief, Resource Management Division
USEPA, Region 9 (2 copies)
California Coastal Commission, San Francisco, Attn: Coastal Program Manager
Sonoma County Department of Transportation and Public Works, Attn: Ken Wells, Susan Klassen, Don Poindexter, 575 Administration Drive, Room 117A, Santa Rosa, CA 95402 (notice only)

California Regional Water Quality Control Board
North Coast Region

ORDER NO. R1-2000-62
ID NO. 1B80149OSON
AND
1B99011RSON

WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR SONOMA COUNTY CENTRAL DISPOSAL SITE AND EAST CANYON EXPANSION UNIT CLASS III WASTE MANAGEMENT UNITS

Sonoma County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. The County of Sonoma, Department of Transportation and Public Works (hereinafter discharger) owns and operates the Central Disposal Site, a Class III solid waste disposal facility. The disposal site has been in operation since 1971, and currently serves as the only operating municipal landfill within the County of Sonoma. The discharger submitted a Joint Technical Document (JTD)/Report of Waste Discharge (ROWD) dated January 15, 1999, for the construction of a new landfill immediately east of the existing facility. Supplemental information to complete filing of the application was submitted on October 22, 1999, January 26, 2000, April 10, 2000, June 22 & 29, 2000 and July 18, 2000. Previous Waste Discharge Requirements (WDR's) did not cover the proposed expansion area.

2. The existing disposal facility has been constructed in a canyon located at 500 Mecham Road, Petaluma, less than 4 miles southwest of the City of Cotati in an unincorporated area of Sonoma County. The facility is located on two unnamed tributaries to Stemple Creek in Section 4 and 9 T5N, R8W, MDB&M (latitude of 38 degrees, 18 minutes north and longitude of 122 degrees, 45 minutes west) as shown in Attachment "A", incorporated herein and made part of this Order.

3. The disposal site accepts non-hazardous and inert solid waste from commercial haulers and private citizens, is open to the public seven days a week, 359 days a year, receiving approximately 1200-1800 tons of refuse per day. The permitted maximum tonnage is 2500 tons per day. The maximum permitted elevation of the site is 565 feet above mean sea level, and the minimum permitted elevation is 212 feet above mean sea level.

4. The total site area is 398.5 acres which includes two landfills, the existing landfill unit "Landfill 1", and the proposed East Canyon Expansion Unit "Landfill 2". The existing landfill footprint covers approximately 130 acres and the proposed expansion area covers an additional 42.8 acres. The total area permitted for refuse disposal is approximately 172.8 acres.

5. The disposal site as delineated in Attachment "B" meets the criteria contained in Title 27, CCR as a Class III landfill for non-hazardous solid wastes.

6. The existing onsite support facilities include County offices, scalehouse, recycling facilities, landfill gas collection, flaring and co-generation power plant, wood and greenwaste diversion processing area, composting operations, material recovery and storage areas, two Class II leachate storage-surface impoundments, leachate treatment plant, and various sedimentation ponds. Onsite operations also include a rock extraction project. The greater improvement plan of development includes additional construction of a public tipping facility, household hazardous waste collection facility and laboratory, as shown in Attachment "C".

7. Potential future development plans include the construction of two expansion landfill units (West Canyon expansion, and Rock Extraction expansion), a compressed gas fuel facility and a soil bioremediation facility. However, these are only proposed projects, are not part of this JTD/ROWD, and therefore not subject to this Order. The discharger must submit a revised Report of Waste Discharge prior to any discharges of waste associated with these proposed projects.

8. Landfill 1 consists of upper and lower units. The upper unit is the original 1971 footprint and is the current location for the County's composting operations. The lower canyon unit was constructed as a vertical expansion area in 1988 and designed with a clay lined dendritic leachate collection recovery system. The entire Landfill 1 existing unit is classified as unlined by current standards. Remaining capacity for the lower canyon is about 1½ years. The upper canyon area will provide capacity for approximately 5 years, requiring the composting operations to be removed and/or relocated offsite. It is estimated that the existing, permitted landfill has capacity until the year 2006.

9. Landfill 2, the East Canyon expansion landfill, will be constructed in four main phases, beginning with the lower, southern canyon, "Phase 1" liner construction proceeding through "Phase IV", which will complete the East Canyon footprint, as shown in Attachment "D". A final "Phase V" will include placing waste over both Landfill 1 and Landfill 2. It is estimated that the expansion area will extend the life of the landfill to the year 2014.

10. Surface, groundwater and landfill gas monitoring locations have been established for both Landfills 1 and 2 as shown on Attachments "E" and "F".

11. Construction of Landfill 2 will result in the filling of 0.98 acres of existing wetlands. The discharger has prepared a wetlands mitigation proposal which will ensure that wetland beneficial uses will be protected. An offsite wetlands

mitigation is planned on a 38-acre County owned parcel at 601 Hammel Road, south of the landfill permitted boundary, as shown in Attachments "B" and "G".

12. The Total Airspace Design Capacity is approximately 32,650,000 cubic yards of waste and cover and the Total Airspace Remaining Capacity is approximately 14,446,000 cubic yards for the 172 acre waste footprint.

13. On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated federal municipal solid waste (MSW) regulations under the Resource Conservation and Recovery Act (RCRA), Subtitle D (Title 40, Code of Federal Regulations, Parts 257 and 258), hereafter referred to as "Subtitle D". These regulations apply to all California Class III landfills accepting MSW, including the Sonoma County Central Disposal Site.

14. Effective July 18, 1997, the water quality regulations for Class II and Class III disposal facilities formerly contained in Chapter 15, Title 23, California Code of Regulations (CCR), and the solid waste regulations formerly in Title 14, CCR, were re-codified into Chapters 1 through 7, Subdivision 1, Division 2, Title 27, CCR (Title 27). Chapter 15 is therefore no longer applicable to this facility.

WASTES AND THEIR CLASSIFICATION

15. The Discharger proposes to continue to accept municipal solid wastes, commercial and industrial wastes, and special wastes, classified as "inert" or "nonhazardous" under Sections 20220 and 20230 of Title 27. The Discharger does not propose to accept wastes defined as "hazardous" or "designated" under Title 27, and these WDRs contain a prohibition against the disposal of such wastes.

16. The landfill accepts nonhazardous grit and screening wastes (special wastes) from local wastewater treatment plants. Liquid wastes generated onsite, such as landfill leachate, is currently trucked for disposal to the Santa Rosa Laguna Sub-Regional Sewage Treatment Plant, under permit No. SR-IW5202 issued by the City of Santa Rosa.

17. The landfill accepts other wastes requiring special handling including autoclaved medical waste, low level contaminated soils, small dead animals, soils from residential areas, and dewatered sludge. County Refuse Bulletins have been developed which describe specific procedures and acceptance criteria for handling these various special wastes or waste suspected of being a hazard.

18. A household hazardous waste exclusion program is in effect at the facility and includes periodic load-checking of wastes.

SITE DESCRIPTION

19. The area surrounding the site is primarily rural grazing area on low rolling hills and valleys. Both landfill units occupy adjacent south-trending valleys that are drained by unnamed tributaries to Stemple Creek.

20. Surrounding land uses include rural residential and agricultural operations including dairy and cattle ranches. The closest subdivision, "Happy Acres", is about 0.5 miles northeast of the facility and has about 70 residences.

21. Groundwater resources for domestic and agricultural water supply serve the surrounding area. There are three adjacent residences associated with dairy and cattle operations served by domestic water supply wells. Numerous additional domestic and irrigation wells are located to the south of the site along Mecham Road.

SURFACE WATER

22. The site is within the Stemple Creek watershed of the Estero de San Antonio Hydrologic Area within the Bodega Bay Hydrologic Unit. Stemple Creek is a coastal tributary to Bodega Bay.

23. The beneficial uses of Stemple Creek, a minor coastal stream not specifically listed in the Basin Plan, and the Estero de San Antonio, are listed below:

    a) Municipal and domestic supply
    b) Agricultural supply
    c) Industrial services supply
    d) Industrial process supply
    e) Groundwater recharge
    f) Navigation
    g) Water contact recreation
    h) Non-contact water recreation
    i) Commercial and sport fishing
    j) Cold freshwater habitat
    k) Preservation of areas of special biological significance
    l) Wildlife habitat
    m) Rare, threatened, or endangered species
    n) Marine habitat
    o) Migration of aquatic organisms
    p) Spawning, reproduction, and/or early development
    q) Shellfish harvesting
    r) Estuarine habitat

24. Stemple Creek has been included on the CWA Section 303(d) list as an impaired water body. The Regional Water Board adopted a Total Maximum Daily Load (TMDL) and Attainment Strategy for the Stemple Creek Watershed on

December 11, 1997, in Resolution No. 97-108. The TMDL lists impairments of the beneficial uses for the Stemple Creek Watershed and sets objectives and targets for the reduction of nutrients, sediment and prevention of erosion to the maximum extent possible. The intent of the TMDL is to restore, enhance and protect the beneficial uses that are being impaired. The Stemple Creek TMDL has not been approved by the State Water Resources Control Board and therefore is not in effect at this time. However, staff will continue to monitor the loading of sediment and nutrients in the watershed and from this facility. Additional controls on these pollutants may be required if necessary in order to achieve water quality objectives.

STORM WATER

25. This Order does not replace the need for a NPDES storm water permit as required by provisions of the Clean Water Act.

26. Storm water run-on and runoff from the site is controlled in a series of perimeter ditches, stormdrain pipes, downchutes and sedimentation ponds located throughout the facility. The purpose of the sedimentation basins is to retain runoff, allowing for settling of sediments, and evaporation. The conveyances route stormwater around the site and off the waste units prior to their discharge to two unnamed tributaries to Stemple Creek.

27. Existing sedimentation basin No. 5 within the East Canyon footprint will be removed and replaced prior to "Phase III" liner construction. Two new sedimentation basins (No.'s 5-replacement and 6) will be constructed for the expansion project at the base of the canyon, as shown in Attachment "B". Landfill runoff from the new unit will be captured by a perimeter ditch system and discharged into the sedimentation basins for settling prior to discharge to Stemple Creek tributaries.

28. The facility receives about 30 inches of average annual precipitation (as shown by the isohyetal map of normal annual precipitation prepared by the Sonoma County Water Agency (1983)). About 95 percent of the storm events occur between the months of November and April. The mean annual evaporation is 43.67 inches, as published by the California Department of Water Resources for Sonoma County (December 1996 - November 1997).

29. The 100-year, 24-hour precipitation event for the Santa Rosa Station is 6.95 inches, based on California Department of Water Resources (DWR) precipitation records, titled, "Rainfall Analysis for Drainage Design Vol. II, Long Duration Precipitation Frequency Data, Bulletin No. 195, October 1976."

30. Both Landfill 1-Existing Unit and Landfill 2- East Canyon Expansion Unit are located at elevations higher than the 100-year floodplain. The Discharger made the required demonstration under Subtitle D (40 CFR 258.11).

31. The discharger has obtained storm water discharge coverage for the facility under the General Industrial, National Pollution Discharge Elimination System (NPDES), Storm Water Permit. The General Permit, No. CAS000001, is issued by the State Water Resources Control Board (SWRCB) under Water Quality Order No. 97-03-DWQ. The permit applies to direct storm water discharges and

storm water discharges from the sedimentation basins. The facility is also required to obtain coverage under the General Construction NPDES Storm Water Permit No. CAS000002, Order No. 99-08-DWQ, for construction of all site improvements, 30 days prior to construction activities.

WETLANDS

32. The project involves removal of an existing creek within the East Canyon and placement of the landfill liner as fill. The Landfill 2- East Canyon expansion will impact 0.98 acres of seasonal wetlands, and 0.08 acres of stream channel and habitat. No federal permit is required for this impact. Provisions of these WDR's require the completion of a wetlands mitigation project intended to replace the function and value of wetlands filled as part of this expansion. The Discharger has demonstrated compliance with the requirements of Section 258.12 of Subtitle D as follows:

a. 40 CFR 258.12 (a) (1) - The Environmental Impact Report indicates that the project as proposed has been designed to minimize impacts to wetlands and that there are no practicable alternatives to the proposed expansion which would be less damaging of wetlands.

b. 40 CFR 258.12 (a) (2) (i) & (ii) — The requirements in these WDRs help to ensure that the proposed project will not violate applicable water quality standards relating to the discharge of waste to land. In the event of a release, however, Title 27 provides a script for evaluation monitoring and corrective action to restore groundwater quality objectives. The requirements within these WDRs also address monitoring of the underdrain discharge which will minimize the potential for a violation of surface water quality standards or toxic effluent limitations under Section 307 of the Clean Water Act. The implementation of best management practices required under the General Storm Water Permit for Industrial Activities for landfill operations, and, as applicable, under the General Storm Water Permit for Construction Activities similarly protects surface waters.

c. 40 CFR 258.12 (a) (2) (iii) — The Environmental Impact Report indicates that surveys for endangered or threatened species and their habitats were conducted. No endangered or threatened species or their habitats were found. However, the project will impact 0.33 acres habitat for the northern red legged frog which is a California Species of Special Concern. The discharger has proposed mitigation to reconstruct 0.50 acres of red-legged frog habitat in the offsite mitigation area as described in the EIR and Wetland Mitigation and Monitoring Plan. US Army Corps of Engineers Nationwide Permits 7-Outfall Structures, 13- Bank Stabilization, 14-Road Crossings, and 26- Headwaters and Isolated Waters, have been issued for the mitigation project on April 18, 2000.

d. 40 CFR 258.12 (a) (3) — The proposed project design, as described in these WDRs, meets the waste containment criteria for a Class III landfill under Title 27, minimizing the potential for a release of solid wastes or leachate which could impact wetlands. The project design also meets the Title 27 requirements for WMU slope and seismic stability, and those for erosion and drainage controls, minimizing the potential for a release of wastes caused by a loss in structural integrity of the WMU, migration of eroded soils or wastes, or

migration of waste constituents in drainage. In addition to these factors, the collection of landfill leachate and disposal at an authorized offsite facility should be sufficient to minimize the potential for a catastrophic release which could impair fish, wildlife, and other aquatic resources and their habitats.

e. 40 CFR 258.12 (a) (4) — In addition to minimizing impacts to wetlands, as described above, the Discharger proposes to offset unavoidable impacts to wetlands by creating and converting approximately 2.6 acres of offsite wetlands, as shown in Attachment "G". To protect offsite wetlands, the Discharger has proposed a Wetlands Mitigation and Monitoring Program (WMMP). The Mitigation Area is an offsite existing un-named tributary to Stemple Creek, with associated springs that are degraded as a result of heavy cattle grazing. The mitigation proposes to restore and enhance the existing degraded condition of the site in addition to creating 7 new seasonal wetland features. These WDRs require implementation of the WMMP, including the submission of annual monitoring reports, so as to comply with this section, which incorporates Section 404 of the Clean Water Act. The plan will be implemented prior to and concurrent with construction of the expansion unit. Provisions of these WDRs will ensure that the proposed mitigation will meet the criteria for wetlands in accordance with an established time schedule.

f. 40 CFR 258.12 (a) (5) — The Discharger has submitted sufficient information within the JTD and EIR to address the wetlands criteria outlined in 40 CFR 258.12.

WATER QUALITY CERTIFICATION

33. The East Canyon expansion involves construction and placement of fill within the southern most area of the existing un-named East Canyon tributary that will remain outside of the lined waste footprint. The project involves placement of fill and rock energy dissipators at the outfall of three pipes which discharge within the existing channel near the property boundary. The pipes will discharge collected springs from an underdrain and diverted surface water from two sedimentation ponds immediately south of the East Canyon refuse footprint to the un-named tributary to Stemple Creek. Fill placement for an underdrain discharge pipe and for two sedimentation pond outfall structures is approximately 25 cubic yards in 70 linear feet of stream channel.

34. The Discharger has obtained authorization under Department of the Army Nationwide Permits, pursuant to Section 404 of the Clean Water Act for the portion of the project within the jurisdiction of the Army Corps of Engineers. This includes the area south of the East Canyon waste footprint and is covered under Nationwide Permits previously referenced in Finding No. 32(c).

35. The Discharger has obtained a California Department of Fish and Game Section 1601 Streambed Alteration Agreement on June 22, 2000. Compensatory Mitigation for the fill (0.001 acres) at the three outfall structures within the East Canyon tributary is included in the 1.4 acres of streambed restoration as part of

the Wetlands Mitigation and Monitoring Plan. This mitigation is intended mitigation for construction impacts.

36. The Discharger is subject to Clean Water Act Section 401, Water Quality Certification standard and additional conditions as set forth in the Provisions of this Order.

37. This Order certifies that any discharge from the Landfill 2- East Canyon expansion project will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ('Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act.

SITE GEOLOGY

38. The geologic units within the property boundaries include Quaternary alluvium, the Late Miocene to Pliocene- Wilson Grove Formation, the Late Miocene to Pliocene- Sonoma Volcanics Group, and the Late Jurassic-to Late Cretaceous Franciscan Formation. These formations are summarized as follows:

    a. The Quaternary alluvium/colluvium occurs within the base of the canyons and thin layers on side slopes and ridgetops. These deposits are interbedded clays, silts, sands and gravels and are removed in the landfill areas as part of grading and cover operations.

    b. The Late Miocene to Pliocene- Wilson Grove Formation unconformably overlies the Franciscan Formation northeast and south of the landfill site. A remnant outcrop of Wilson Grove existed within the East Canyon but has since been removed during grading at the site. The formation consists of poorly consolidated, massive to interbedded, silty sandstone to fine grained, sandy gravels. This formation is the primary water bearing formation for many of the domestic water supply wells within the area.

    d. The Late Miocene to Pliocene-Sonoma Volcanics Group, occurs locally to the southwestern border of the property. The formation has not been mapped in contact with the waste units and outcrops southwest of the Dunham fault along the southwest boundary of the site.

    e. The Late Jurassic-to Late Cretaceous Franciscan Formation underlies both canyon landfill areas, is a regional bedrock unit and the primary geologic unit underlying the site. The formation is comprised of both massive and interbedded graywacke sandstones, with shales and metavolcanic rocks. The formation exhibits deformation ranging from fracturing and consolidation of layered units to complete melange or mixed rock types. The Wilson Grove Formation and Sonoma Volcanics Group overlie the Franciscan Formation and occur discontinuously throughout the region.

39. The facility's location within southwestern Sonoma County is in proximity to numerous regional active fault zones, including the Rodgers Creek- Healdsburg and San Andreas Fault zones which are at distances of approximately 5.7 miles and 15 miles away, respectively. Seismic Hazard Evaluations have been

performed using Maximum Probable Event Magnitudes in development of the Landfill 2- East Canyon expansion design.

40. Local faults include the Tolay, Dunham, and an "unnamed fault". The Tolay fault is within 1-mile northwest of the site and is considered potentially active. The Dunham fault and the "unnamed fault" lie within the property boundary of the site. The Dunham fault was investigated onsite in 1992 and found to be "probably pre-Holocene", but this could not be confirmed. The Dunham fault is therefore considered to be potentially active, but is not within 200' of the landfill footprint. The unnamed fault trace is located in the East Canyon area and trends east and slightly north. A fault investigation was completed in 1993 and concluded the fault trace to be pre-Holocene and likely pre-Quaternary.

41. There are no Holocene faults within 200'of the Landfill 2 East Canyon expansion proposed refuse footprint.

GROUNDWATER

42. The primary water table lies within the Franciscan Formation ranging in depth from about 20–130 feet below well elevations (from top of casing). Many Franciscan Formation monitoring wells have demonstrated low-yielding characteristics.

43. Shallow groundwater conditions are present in the Alluvial wells with groundwater ranging in elevation from the surface to about 12 feet. One alluvial well is artesian during wetter periods of the year. Several alluvial wells are also reported dry during the summer months.

44. The natural groundwater gradient direction in the Franciscan Formation is to the southwest, trending with the canyon topography in both Landfill 1 and Landfill 2 area. It is likely controlled by fractures to some degree.

45. The Wilson Grove Formation marine sandstone is a principal water producing formation and a primary groundwater recharge formation in Sonoma County. Many domestic wells located deep within this formation and within 1 mile of the site are reported to have moderate to high yields. The Wilson Grove Formation occurs locally to the south of Hammel Road and to the northeast of site underlying the Happy Acres subdivision. Domestic water supply wells within the subdivision draw water from both geologic formations, the upper Wilson Grove sandstone and the underlying Franciscan bedrock formation.

46. Beneficial uses of areal groundwaters include:

    a. domestic water supply
    b. agricultural water supply
    c. industrial service supply

CORRECTIVE ACTION

47. A release of waste constituents from Landfill 1 to groundwater was discovered in 1995. Numerous detection and corrective action monitoring wells have since

been installed in the bedrock Franciscan formation, as identified in MRP No. R1-2000-62 and shown on "Attachment E".

48. Monitoring of the shallow zone shows the presence of elevated minerals and increased various volatile organic compounds (VOCs), including vinyl chloride. The shallow VOC plume extends beyond the landfill footprint towards the southwest County property boundary. Inorganic constituents have also been detected at elevated levels. The source area was identified as a leak in the Landfill 1 toe-area barrier wall. The extent of contamination appears to be contained within the area between the landfill toe barrier wall and the property line barrier wall systems and is consistent with the trend of shallow groundwater flow. The upper Landfill 1 existing unit has also had confirmed detections of VOC's at a northern perimeter monitoring well (No. F5) in close proximity to the waste unit. The source of this VOC detection is likely landfill gas migration, and detections have been transient.

49. The Discharger has implemented an Evaluation Monitoring and Corrective Action Program (EMCAP) to address the release and investigate all potential sources of contamination. Interim measures to address the release have been implemented including: removal of the central canyon sedimentation pond and redirection of all surface flow around the toe; installation of a collection station within the barrier wall leak for discharge to the leachate ponds; improvements to the landfill gas and leachate extraction and collection system to de-water the landfill of leachate; and conducting a groundwater remediation and feasibility study.

50. To control landfill gas (LFG), the Discharger also installed numerous additional landfill gas extraction wells.

51. On May 13, 1999, Regional Board staff requested the Discharger to conduct additional evaluation of the landfill gas and leachate collection facilities. A report was submitted on May 28, 1999, indicating that excessive leachate volumes, in excess of 100'deep in onsite wells, were present within the Landfill 1 refuse prism, thereby inundating collectors and inhibiting the collection of landfill gas. On July 19, 1999, the Discharger was directed to implement additional leachate extraction necessary to de-water the landfill and develop a plan for additional remedial measures, pursuant to section 13267 of the California Water Code. An initial workplan was submitted to address needed remedial measures in accordance with Section 13267 of the Water Code by the required submittal dates.

52. Although progress has been made in collection and extraction of leachate from Landfill 1, further remedial efforts are needed to minimize the leachate buildup on the leachate collection and recovery system, landfill gas collector system and Landfill 1 barrier wall.

53. On May 3, 1999, pursuant to section 13267 of the California Water Code, Regional Board staff also requested the installation of landfill gas monitoring probes along the main landfill haul road separating the current bottom of the Landfill 1 existing unit and the proposed Landfill 2-expansion unit. The probes were needed to monitor the effectiveness of gas removal in an area of potential outward gas migration from the unlined Landfill 1 towards the proposed adjacent underdrain system for Landfill 2.

54. The Discharger installed 7 Temporary Gas Probes at four locations as noted in Attachment "F". The depth of these probes ranges from 16 to 41 feet below ground surface. Initial monitoring of the probes detected low levels of landfill gas within all probes with the exception TMP-3, which was non-detect for methane. Landfill gas monitoring results for the Temporary Gas Probes has shown improvement, with no detected levels of methane in the probes since March 29, 2000. However, the following findings indicate continued monitoring of the probes is warranted to demonstrate adequate compliance through future wet seasons.

    a. Deeper probes TMP-2 (shallow) and TMP-3 have been, at times, inundated by groundwater during the wet season, therefore monitoring was not possible.
    b. TMP-3 remains flooded as of the June 7, 2000, monitoring event.
    c. TMP-1 was initially reported to have detection of 10% methane by volume in June of 1999. December 1999 and January 2000 results indicated increased landfill gas detections of 30 % methane by volume during the wet season. TMP-1 results for February 18, 2000, through March 22, 2000 indicate negligible detections of methane. Since March 29, 2000, TMP-1 results indicate methane has not been detected.

55. The Discharger is continuing to address necessary remedial efforts to control landfill gas and leachate volumes. Continued progress to abate the build-up of leachate and to mitigate landfill gas migration towards the East Canyon is required in accordance with the Compliance Time Schedule Component of this Order, Provision No. 21. A technical demonstration of adequate mitigation is required prior to construction of Phase III of the Landfill 2 East Canyon expansion plans.

56. In the event landfill gas contaminants are detected within the discharge from the East Canyon expansion underdrain area, the Discharger will implement corrective action and collect all underdrain flow for discharge to the Class II surface impoundments.

WASTE MANAGEMENT UNIT DESIGN

57. Under the criteria of Section 20260(b)(1) of Title 27, the natural geologic materials underlying the site are not sufficient to protect beneficial uses of groundwater. Section 20260 (b)(2) therefore requires a minimum, prescriptive two-foot thick, single clay liner (1×10^{-6} cm/sec).

58. The Federal Subtitle D design criteria for new MSW landfills, and lateral expansions of existing landfills, are as follows:

    a. a leachate collection and removal system (LCRS)
    b. a single synthetic liner at least 40 mil thick (at least 60 mil if HDPE)
    c. two feet of compacted soil, 1×10^{-7} cm/sec (0.1 feet/year)

    The LCRS must convey all leachate which reaches the liner to a sump without relying on unlined or clay-lined conveyances. Engineered alternative designs are allowed in lieu of the prescriptive standard if the design meets the performance criteria of the regulation (40 CFR Sections 258.40 (a)(1) and (c)), and is approved as an engineered alternative by the Board under Section 20080(b) of Title 27.

59. Implementation of Subtitle D and SWRCB Resolution 93-62 containment criteria for a Class III MSW landfill base-liner, as applied to for this site, are more stringent than Title 27.

60. Although Landfill 1 footprint is unlined, it qualifies as an "existing" Class III MSWLF under Section 20080 (d) of Title 27 and, with the exception of closure, is therefore exempt from the Title 27 prescriptive containment criteria (the landfill also pre-dates and is exempt from the Subtitle D containment criteria). However, since there has been a release from the WMU, it must comply with the Title 27 requirements for monitoring and corrective action.

61. Landfill 1 was constructed in phases, an upper unlined canyon fill and a lower vertical expansion area constructed with a clay lined dendritic leachate collection system. Landfill 1 is required to operate with minimal buildup of leachate within the waste footprint and leachate collection recovery system (LCRS).

62. During construction of the vertical expansion for Landfill 1, three cutoff barriers were constructed across the bottom of the canyon; one at a mid level area, one at the toe of the ultimate fill area, and one along the property boundary downgradient from all disposal site operations. The barriers are constructed of compacted clay having a permeability of 1×10^{-6} cm/sec or less, and they are keyed into the Franciscan formation.

63. The Discharger proposes to construct an engineered alternative design (EAD) to the prescriptive Title 27 and Subtitle D designs for the Landfill 2 composite liner system. The proposed engineered alternative design substitutes a geosynthetic clay liner (GCL) for one foot of clay in the base liner, and for two feet of clay on the side slopes as shown in Attachment "H" and outlined as follows:

East Canyon Composite Liner and LCRS: Side Slopes:

a. Minimum two-foot operations layer
b. LCRS (geotextile/geonet)
c. 60-mil HDPE geomembrane liner
d. Geosynthetic clay liner (GCL) with 30 mil HDPE backing
e. Geocomposite capillary break
f. Prepared compacted subgrade

East Canyon Composite Liner and LCRS: Floor Area

a. Minimum two-foot operations layer
b. Nonwoven geotextile filter fabric
c. One-foot gravel LCRS drainage layer
d. Geotextile cushion layer
e. 60-mil HDPE geomembrane liner (bottom side textured)
f. Geosynthetic clay liner (GCL) with 30 mil HDPE backing
g. 1' thick compacted clay liner (1×10^{-7} cm/sec)
h. Geotextile separator layer
i. 1' thick capillary break/underdrain system (granular materials)
j. Prepared compacted subgrade

Phase V Liner and LCRS: Tie into Existing Unit

a. Minimum two-foot operations layer
b. Geocomposite LCRS
c. 60-mil HDPE geomembrane liner (bottom side textured)
d. Geosynthetic clay liner (GCL)
e. Geocomposite leachate collection layer
f. Sub-base layer
g. Reinforced layer
h. Prepared subgrade of intermediate cover

64. The Discharger is requesting approval of the EAD for Landfill 2 based on technical findings stating the EAD is as protective, and likely more protective, than the prescriptive liner and satisfies Finding No. 58, above.

65. The Discharger has made the demonstration required by Section 20080(b) of Title 27, namely that construction of a prescriptive standard liner is unreasonably or unnecessarily burdensome and will cost substantially more than an EAD, and that there is a specific EAD that is consistent with both the performance goal and the prescriptive standard which affords equivalent protection against water quality impairment. This demonstration was made in the January 2000 Joint Technical Document, Section 8 and JTD Appendix E.

The Discharger has also demonstrated that the EAD satisfies the performance criteria contained in 40 CFR Section 258.40 because:

a. Leachate will be controlled during the operational life of the unit.
b. Landfill gas will be controlled as long as the landfill is biologically active.
c. The expansion WMU will employ a composite liner consisting of 60-mil HDPE underlain by a geosynthetic clay liner.
d. Site-specific hydrologic, climatic, and leachate characteristics have been considered in designing the expansion as described in the Joint Technical Document and the Environmental Impact Report.
e. The groundwater point of compliance is at the southern edge of the landfill and was set after considering the following:
    i. leachate characteristics,
    ii. hydrogeologic factors,
    iii. groundwater flow,
    iv. proximity of groundwater users,
    v. alternative drinking water supplies,
    vi. existing groundwater contamination,
    vii. public health, and
    viii. the predictable capability of the landfill operator.

SURFACE IMPOUNDMENT DESIGN

66. Landfill leachate is managed on-site in two Class II surface impoundments, LP1 and LP2. Both ponds are double lined leachate ponds. LP1, constructed in 1988, has a soil based liner system and a design capacity of 1.3 million gallons. LP2, constructed in 1995, has a geosythetic based liner system and a design capacity of 2.9 million gallons. The geosynthetic based liner system for LP2 includes high-density polyethylene (HDPE) liner materials.

The Class II surface impoundments have been constructed as follows:

Leachate Pond- LP1:

a. Drain rock protection layer
b. 8" thick select soil protection layer
c. Vapor barrier geotextile fabric with overlay of geomembrane
d. 3' thick compacted clay liner (1 x 10^{-8} cm/sec)
e. 1' thick layer permeable drain rock
f. 3' thick compacted clay liner (1 x 10^{-8} cm/sec)
g. Prepared subgrade

Leachate Pond – LP2:

a. 60-mil HDPE geomembrane liner (primary geomembrane liner)
b. LCRS drainage layer (geonet sump riser, granular material, geotextile)
c. 60-mil HDPE geomembrane liner (composite secondary liner)
d. Geosynthetic clay liner (GCL)
e. underdrain system (geocomposite, geonet and filter geotextile)

67. Liquid infiltration has been detected in both LP1 and LP2 leachate collection and recovery system layers indicating leaks of the primary liners. LP1 is schedule for repair in summer of 2000, and will include the installation of a double HDPE liner system with a LCRS over the existing clay liner. LP2 is offline, undergoing testing procedures. Repairs are planned thereafter. As an interim measure, liquid from the LCRS's is pumped and removed to prevent any significant build-up.

WASTE MANAGEMENT UNIT SITING

68. Section 20240 (c) of Title 27 requires that *new* landfills be "sited, designed, constructed and operated", to ensure or maintain at least five feet of separation between the contained wastes and the highest anticipated level of the groundwater table. Existing landfills are to be "operated" to maintain the required separation.

69. The Discharger has proposed an EAD to the five-foot separation requirements. The design incorporates an engineered alternative to the minimum separation between the highest anticipated groundwater and the waste, due to the fact that areas of the Landfill 2 East Canyon expansion contain shallow groundwater including seasonal springs. The proposed containment system design includes:

Base grade:

a. 1 foot thick granular blanket as a capillary break-underdrain layer
b. Capillary break underdrain layer discharge pipe

Side slopes:

a. Geotextile filter
b. Geonet
c. Geotextile filter

70. The Discharger has proposed that the EAD provides an equivalent or improved water quality protection design as compared to the prescriptive standards by:

a. A positive barrier to the capillary rise, effectively separating groundwater from the liner,
b. providing a means of controlling, collecting, and monitoring groundwater migrating beneath the landfill,
c. providing a means of first detecting and then removing leachate in the event it penetrates the composite liner; and,
d. providing an alternative secondary component of the composite liner (GCL) with a hydraulic conductivity at least a hundred times less than the Title 27, CCR and Subtitle D prescriptive standards.

71. The Discharger has demonstrated that the EAD satisfies the engineered alternative design criteria contained in Title 27 CCR 20080 (a) (4) (b) for the above noted reasons.

72. The Discharger has provided the necessary document certifications pursuant to Section 20240(d) of Title 27 for design and construction of each existing landfill unit at the site.

73. Approximately 1.7 million cubic yards of soil and rock will be excavated during the course of preparing the subgrade and perimeter drainage channels to accommodate the expansion landfill. The soil will be stockpiled for use in Landfill 1 as final cover and for other future operations.

CLOSURE AND FINANCIAL ASSURANCES

74. Since Landfill 1-Existing Unit was not closed prior to the federal deadline (October 9, 1993), the closure requirements of Subtitle D apply to all of Landfill 1.

75. The Discharger has proposed to close the entire landfill inclusive of Landfill 1 and Landfill 2 following completion of final Phase V construction over both units. Closure is estimated to occur in 2014. The highest elevation of the close landfill will be about 565 feet MSL.

76. The Discharger has submitted a Preliminary Closure and Post-Closure Maintenance Plan describing the planned closure configuration for both landfills. The final cover designs are as follows:

Landfill 1:

a. Erosion layer,-minimum one-foot vegetative cover soil
b. Drainage layer,- geocomposite with sufficient hydraulic capacity
c. Barrier layer,-GCL (5×10^{-9} cm/sec) *or* minimum one-foot thick clay layer (1×10^{-6} cm/sec)
d. Foundation layer,-minimum two-foot thick soil layer (may incorporate intermediate cover)

Landfill 2:

a. Erosion layer,-minimum one-foot vegetative cover soil
b. Drainage layer,- geocomposite with sufficient hydraulic capacity
c. 40 mil textured geomembrane
d. Barrier layer,-GCL (5×10^{-9} cm/sec) *or* minimum one-foot thick clay layer (1×10^{-6} cm/sec)
e. Foundation layer,-minimum two-foot thick soil layer (may incorporate intermediate cover)

The use of GCL in lieu of clay would be an EAD to the prescriptive Subtitle D standard for a composite liner.

77. Perimeter slopes in the existing landfill area will be no greater than 3:1 (horizontal-to-vertical) for Landfill 1 and the final slopes in the expansion area will be approximately 4:1. The top deck of Landfill 2 will be sloped at 5% for adequate drainage.

78. Slope stability analyses were performed for the site including seismic site response and deformation analyses completed for the Healdsburg-Rogers Creek Fault. Deformations in the landfill mass/liner system and final cover associated with the calculated yield accelerations were evaluated and found to be less than 6 inches. Interface testing was completed to evaluate the strength of the critical interface between the GCL and geomembrane under hydrated and unhydrated conditions. Slope stability analyses were completed using the interface test results and modified waste shear strength. Results of the analyses indicate that all factors of safety are larger than 1.5 and seismically induced deformations are less than 6 inches.

79. The financial assurance mechanism consists of an Enterprise Fund for closure and a Pledge of Revenue for post-closure maintenance. Enterprise monies are paid into the fund annually or pledged in accordance with an approved estimate, as waste is discharged to the landfill. The current preliminary closure cost estimate for both landfills is $14,393,106 as estimated in 2000 dollars. The current post-closure maintenance cost estimate is 10,310,446 as estimated in 2000 dollars.

80. The discharger is required to update approved cost estimates annually to account for inflation.

81. The Discharger has provided for $1.67 million to cover the costs of corrective action for a known or reasonably forseeable release (RFR) at the existing landfill. It is estimated that an additional $300,000 will be sufficient to cover corrective action costs for a possible release from the Landfill 2- East Canyon expansion unit. Board staff has approved the plan and amount funded for the existing landfill, pending further development and confirmation of estimates for the expansion unit. The financial assurance mechanism is planned as a Pledge of Revenue. Sonoma County is in the process of updating the financial mechanism to reflect a combined total for both RFR cost estimates.

On August 4, 2000, the discharger submitted Sonoma County Board of Supervisors Resolution No. 00-0831, dated July 11, 2000, and a Pledge of Revenue Agreement, signed July 19, 2000, by Sonoma County Director of Transportation and Public Works and County Counsel, which establishes financial

assurance for both landfill units. The combined Pledge of Revenue, corrective action cost estimate is 2,048,127, adjusted for year 2000 inflation, and will be complete once it is reviewed and signed by the California Integrated Waste Board representatives.

82. An annual review of the RFR scenario and cost estimate is required within the facility's annual report. As a result of the update, any additional financial assurance monies will need to be provided for within the annual update.

CEQA AND OTHER CONSIDERATIONS

83. The discharge of waste to the existing Central Disposal Site is presently governed by Waste Discharge Requirements Order No. 89-8, adopted by the Regional Water Board on February 22, 1989, and General Waste Discharge Requirements Order No. 93-83, adopted by the Regional Water Board on September 22, 1993.

84. The action to revise WDRs for the existing solid waste management facility (Landfill 1), and the proposed expansion (Landfill 2), is subject to the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.).

85. Two Environmental Impact Reports (EIRs) were prepared for the County of Sonoma Department of Public Works, Transportation and Integrated Waste Division and approved by the Sonoma County Board of Supervisors on August 18, 1998 and December 15, 1998, to satisfy the requirements of the California Environmental Quality Act. The EIRs identified significant environmental impacts associated with the landfill expansion project and the reasonably foreseeable rock extraction project, and included a site mitigation plan for each significant impact.

86. The EIRs identified the following potential significant water quality and biological impacts:

a. Grading may cause soil erosion and a release of sediment
b. Leachate storage ponds may not be adequately sized
c. Landfill gas may impact the underdrain and discharge to surface water
d. Spread of existing groundwater contamination
e. During construction there could be spills of fuels, liquids or explosives, contaminating surface water
f. Existing groundwater monitoring program is not adequate to detect contamination for the expansion area
g. Existing gas monitoring system may not be adequate to detect gas migration from the expansion area
h. Blasting could fracture rock, damage soil liners, buried leachate control of gas collection pipes, groundwater monitoring wells and a section of the eastern leachate pond
i. Expansion will displace area of wetlands, riparian vegetation habitat for red-legged frog, individual frog or egg masses and active raptor nests

87. The EIRs evaluated the impacts and found that the implementation of a corrective action plan, leachate management plan, spill plan, blasting plan and expanded groundwater and underdrain monitoring plan, in addition to compliance with Title 27 and Subtitle D and a Wetlands Mitigation Program, will provide adequate

water quality protection and reduce potential water quality and biological impacts to a less-than-significant level. These waste discharge requirements include requirements that avoid or substantially lessen significant impacts to water quality.

88. The EIRs found that the projects would have the following significant impacts after mitigation as listed in the summary table below:

Summary of Significant Impacts and Mitigation Measures that Substantially Lessen Environmental Impacts

PROJECT IMPACT	MITIGATION
Air Quality	**Air Quality**
1. Nox emissions resulting from the landfill expansion will exceed significance thresholds during the years 2005 through 2014.	1. Reduce emissions by: requiring contractors to limit idling time of diesel equipment and to service equipment at regular intervals; including incentives for using electric motors for stationary equipment and natural gas fuel for mobile equipment; and requiring that explosives contain at least 5.7% fuel oil by weight.
2. ROG emissions from the expansion will exceed significance thresholds shortly after year 2005 through 2014.	2. Reduce emissions by: continuously reviewing the landfill gas collection system to incorporate the latest technology to minimize the release of landfill gas to the atmosphere and require contractors to limit idling time of diesel equipment and to service equipment at regular interval, including incentives for using electric motors for stationary equipment; blasting standards.
3. The excavation area could, during the refuse disposal phase of the project, generate odors that could result in off-site complaints.	3. Minimize potential for landfill odors by maintaining an adequate stockpile of cover material to ensure that refuse can be covered each day. Conduct monthly inspections of landfill cover for cracks, and repair as needed.
Land Use	**Land Use**
4. Project components would cause some agricultural land to be covered to non-agricultural use.	4. By easement or deed restriction, retain portion of land to be acquired in agricultural use, by easement of deed restriction dedicate an unused portion of the landfill parcel for permanent agricultural use.

Visual	Visual
5. Construction and operation of the East Canyon landfill expansion results in a significant visual change as seen from portions of Pepper Road and Mecham Road.	5. Plant trees near Mecham Road/Hammel intersection to partially screen the expansion area.
6. The landfill expansion will cause the existing litter problem to continue for a longer time into the future, resulting in a visual impact on local roads.	6. Continue the existing litter control program and expand it to include the East Canyon landfill, and expand it to include the rock excavation area while the landfill is in operation; post signs encouraging reporting of violations.
7. At project completion the East Canyon landfill expansion will have a different appearance from the surrounding landscape when viewed from portions of Mecham and Pepper Roads.	7. Plant trees near Mecham/Hammel intersection to partially screen the landfill.
Cumulative Impacts With Rock Extraction Project	**Cumulative Impacts With Rock Extraction Project**
AIR QUALITY	**AIR QUALITY**
8. Same as 1, 2 and 3 above, except that impact will be until the year 2015.	8. Same as 1, 2 and 3 above.
9. The landfill expansions and the Rock Extraction project would continue the existing potential for landfill odors until the year 2015.	9. Minimize potential for landfill odors; by maintaining an adequate stockpile of cover materials to ensure that refuse can be covered each day.
TRAFFIC	**TRAFFIC**
10. Cumulative traffic would degrade the operation of the Stony Point/W. Railroad intersection to Level of Service (LOS) D between 2005 and 2015.	10. Proposed project and Rock Extraction project to pay traffic mitigation fee.

11. As a result of cumulative traffic, the Redwood Highway - Commerce Boulevard intersection would degrade to LOS F by 2015.	11. Signalization and an extra northbound lane to be implemented by others.
LAND USE	**LAND USE**
12. The proposed project would add to the cumulative conversion of agricultural land to non-agricultural use.	12. No practical mitigation has been identified.
13. The Rock Extraction project would cause the existing litter problem to continue for a longer time into the future, resulting in a visual impact on local roads until 2015 instead of 2014.	13. Continue the existing litter control program as long as landfill is open.
NOISE	**NOISE**
14. Traffic associated with landfilling phases would result in significant noise impacts on eleven Mecham Road and eleven Stony Point Road residences, possibly resulting in interior levels that exceed 45 dB.	14 Determine the residences which cannot meet the 45dB interior noise level standard and pay cost of improving the residences to meet that standard; noise sensitivity training.
15.Traffic associated with the landfilling phase would result in significant noise impacts on 11 residences on Stony Point Road.	15. Construct a 6 foot high solid wood fence along the front of the property lines.

89. The discharger has identified several environmental effects that may not be mitigated to a less than significant level. These effects include traffic and circulation, noise, air quality, land use and visual resources. The discharger found that the following benefits of the project override these above effects: environmental, economic, legal, social, technological, and other benefits of the project. Specific benefits include:

a. Adding additional landfill capacity will protect public health and minimize illegal dumping.

b. Economic benefits include lower refuse disposal costs than other alternatives.
c. Environmental impacts associated with disposal will be minimized since the landfill expansion would allow continued disposal of solid waste in a regulatory-compliant facility as opposed to illegal disposal.
d. The landfill expansion component provides a convenient and cost effective disposal service.
e. Construction of the landfill expansion will ensure that solid waste infrastructure is in place to accommodate existing citizens and new development.
f. The landfill expansion will demonstrate capacity at least through the year 2009 as required by law.
g. The landfill expansion will provide for disposal capacity during the time it takes to develop a new disposal site for the longer term.

90. The Regional Water Board has considered the EIR and proposed mitigation measures and has determined that compliance with this order will mitigate any potential adverse water quality impacts.

91. The Regional Water Board Water Quality Control Plan for the North Coast Region includes water quality objectives and receiving water limitations.

92. This order implements:

a) *The Water Quality Control Plan for the North Coast Region (Basin Plan)*
b) The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the CCR, effective July 18,1997, and subsequent revisions;
c) The prescriptive standards and performance criteria of RCRA Subtitle D, Part 258;
d) State Water Resources Control Board Resolution No. 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted June 17, 1993; and
e) The Stemple Creek Total Maximum Daily Load and Attainment Strategy adopted December 11, 1997.

PROCEDURAL REQUIREMENTS

93. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

94. The Regional Water Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

95. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this facility and discharge.

96. The permitted discharge is consistent with the antidegradation provision of State Water Resources Control Board Resolution No. 68-16. The impact on existing water quality will be insignificant.

THEREFORE, IT IS HEREBY CERTIFIED that this Order certifies that any discharge from the Landfill 2- East Canyon expansion project will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ('Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water provided that the following requirements are complied with AND:

IT IS FURTHER ORDERED that Waste Discharge Requirements Order No. 89-8 be rescinded and General Waste Discharge Requirements Order No. 93-83 be amended to delete the Central Landfill, and the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Disposal of waste outside of the permitted footprint, shown on Attachment B, incorporated herein and made part of this Order, is prohibited.

2. The discharge of "hazardous waste" and "designated waste" at this facility is prohibited. The discharge of leachate from the landfill unit and LCRSs at this facility is prohibited. For the purposes of this Order, the terms "hazardous waste" and "designated waste" are as defined in Title 27, CCR.

3. The discharge of waste including solid, liquid, leachate, or landfill gas to surface water, surface water drainage systems or groundwater is prohibited.

4. The discharger shall not cause the concentration of any Constituent of Concern to exceed its respective concentration limit in any monitoring medium. The concentration limit for each monitoring parameter will be set at the background concentration. Data analysis will be performed in accordance with the approved Monitoring and Reporting Order.

5. Discharges of waste to either a landfill unit that has not received wastes or to a lateral expansion of a landfill unit are prohibited, unless the discharge is to an area equipped with a containment system which meets requirements in Item B Discharge Specifications, below.

6. The discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids) to Landfill 1 and Landfill 2 is prohibited, with the following exceptions:

   a) de-watered sewage or water treatment sludge as provided in Section 20220(c) of Title 27 may be disposed of on lined areas or the vertical expansion area of Landfill 1, and

   b) leachate may be used for dust control over lined areas with the written approval of Board staff.

7. The discharge of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity to Landfill 1 or Landfill 2 is prohibited.

8. Ponding of liquids, including rainfall runoff and leachate, over solid waste disposal cells is prohibited.

9. The disposal of containerized liquids at this facility is prohibited.

10. The discharge of waste to ponded water from any source is prohibited.

11. The discharge of waste to surface waters or within 50 feet of surface waters is prohibited.

12. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:

    a) require a higher level of containment than provided by the unit,
    b) are "restricted hazardous wastes", or
    c) impair the integrity of containment structures,
    is prohibited.

13. The disposal of wastes containing greater than one percent (>1%) friable asbestos is prohibited.

14. The discharge of wastes to Landfill 2- East Canyon Phases is prohibited until (1) all relevant tasks in Provision 21 are completed to the satisfaction of the Executive Officer, and (2) each phase of liner is constructed and certified to be complete by the Discharger's engineer and approved in writing by the Executive Officer.

15. The discharge of landfill wastes to a storm water sedimentation basin, including VOC-impacted groundwater, is prohibited.

16. In the event landfill gas contaminants are detected within the discharge from the East Canyon expansion underdrain area, the Discharger shall implement corrective action and collect all underdrain flow as leachate for discharge to the Class II surface impoundments.

17. The discharge of any waste in any manner not specifically described in the findings and regulated by this Order is prohibited.

18. Creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code (CWC), is prohibited. [Health and Safety Code, Section 5411]

B. DISCHARGE SPECIFICATIONS

General Specifications

1. The discharge of wastes shall not cause water quality degradation by allowing a statistically or non-statistically significant increase over background or baseline

concentrations as determined in accordance with Monitoring and Reporting Program No. R1-2000-62.

2. Wastes shall only be discharged into, and shall be confined to, the landfill units specifically designed for their containment.

3. Leachate generation by a landfill unit shall not exceed 85% of the design capacity of the sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for efficient pump operations, then the Discharger shall immediately cease the discharge of sludges and other high-moisture wastes to the landfill unit and shall notify the Board in writing within seven days. Notification shall include a timetable for corrective action necessary to reduce leachate production.

4. Waste discharged at this site shall be provided with approved interim cover material. The active face shall not be excessively large for daily waste placement. The active face shall receive approved daily cover. All inactive areas shall be capped with at least one foot of clean, earthen material or approved interim cover material, compacted and graded to drain from the active area.

5. All daily cell runoff shall be collected and controlled as leachate.

General WMU Construction

6. Clay liners shall have a maximum hydraulic conductivity of 1×10^{-7} cm/sec and a minimum relative compaction of 90%. Landfill caps shall have a maximum hydraulic conductivity of 1×10^{-6} cm/sec and a minimum relative compaction of 90%. Hydraulic conductivities of liner materials shall be determined by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be determined by laboratory tests using water. Hydraulic conductivities determined through laboratory methods shall be confirmed by field-testing in accordance with the General Monitoring and Reporting Provisions. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the liner and cap meet the hydraulic conductivity and compaction requirements.

7. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of fluid in any LCRS sump shall be kept at or below the level needed to ensure efficient pump operation.

8. Each landfill unit phase constructed after the effective date of this Order shall be designed and constructed in accordance with the applicable provisions of Title 27 and this Order and approved by the Executive Officer prior to operation. Prior to the beginning of construction for each new construction phase, a Final Design Report shall be submitted to the Executive Officer for review and approval and shall include, but not be limited to, the engineered design plans for the WMU, the contract specifications, a construction quality assurance (CQA) plan to verify that construction specifications will be met, and a revised water quality monitoring plan. Written approval of the final design report shall be obtained from the Executive Officer prior to construction of the landfill liner or cap. A final construction report shall be submitted for approval by the Executive Officer after

each phase of construction and prior to the discharge of waste into the constructed phase. The final construction report shall include, but not be limited to, as-built plans for the WMU, a CQA report with a written summary of the CQA program and all test results, analyses, and copies of the inspector's original field notes, and a certification as described in the Landfill Specifications, below.

Landfill Specifications

9. All WMU containment structures installed after October 9,1993, shall meet the requirements of Subtitle D, including the prescriptive requirements described in Finding No. 58, or the EAD described in Finding No. 63.

10. All WMU containment structures shall meet the general criteria set forth in Section 20320 of Title 27.

11. WMU containment structures shall be designed and constructed under the direct supervision of a California registered civil engineer, or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards (except where exempt or approved as an engineered alternative design herein) and performance goals of Title 27 prior to waste discharge. In the case of an engineered alternative, the registered civil engineer or certified engineering geologist must certify that the waste management unit has been constructed in accordance with Board approved plans and specifications. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:

    a. demonstrate that the waste management unit has been constructed according to the specifications and plans approved by the Board.
    b. Provide quality control on the material and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans and specifications.

12. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged waste over the operating life, closure, and post closure maintenance period of the waste management unit.

13. New landfill units and lateral expansions shall not be located in wetlands unless the Discharger has successfully completed, and the Board has approved, all demonstrations required for such discharge under 40 CFR 258.12(a).

Surface Impoundment Specifications

14. Both Class II Surface Impoundments, leachate ponds LP1 and LP2, shall be operated in accordance with an approved leachate management plan. All offsite discharge of leachate shall be to a legal point of disposal as presented within the approved leachate management plan. The legal point of disposal is currently the City of Santa Rosa Sub-Regional Laguna Sewage Treatment Plant under permit No. SR-IW5202. The existing permit to discharge to the Laguna Plant is scheduled to expire on April 07, 2002. The City of Santa Rosa periodically updates their requirements on a 5 year basis. The Discharger is intending to update their permit with the City of Santa Rosa in accordance with the periodic

review. Any change in the legal point of disposal shall be provided in writing to the Regional Board prior to the change in discharge.

15. The Discharger shall maintain at least 2 feet of freeboard in the leachate ponds LP1 and LP2 at all times.

16. The leachate ponds shall be operated with dedicated freeboard measurement devises at all times.

17. The Discharger shall notify Regional Board staff immediately of any violations in freeboard requirements in either LP1 or LP2 any time.

18. Leachate ponds LP1 and LP2 shall be fully inspected annually and integrity tested, as needed, in accordance with the applicable provisions of Title 27. Inspection reports or testing results shall be submitted by **February 15, annually** and include a complete report of findings and provisions for completion of all necessary maintenance, repairs, and submittal of CQA reports for repairs.

Landfill Closure Specifications

19. At closure, each landfill shall receive a final cover in accordance with the prescriptive standards of Subtitle D and Title 27, or the EAD, as described in Finding No. 76.

20. Vegetation shall be planted and maintained over intermediate cover and closed landfill areas. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.

21. Closed landfill units shall be graded to at least a three-percent (3%) grade and maintained to prevent ponding and infiltration.

22. The WMU slopes shall not exceed a horizontal-to-vertical ratio of 1.75:1, without benching, to ensure slope stability. Other areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion.

23. Closure of each waste management unit shall be performed under the direct supervision of a registered civil engineer or California certified engineering geologist.

Protection from Storm Events

24. Both active and closure WMUs shall be designed, constructed, and operated to prevent inundation or washout due to floods with a 100-year return period. Class III landfill units and related containment structures shall be constructed and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under 100-year, 24-hour precipitation conditions.

25. Precipitation and drainage control systems shall be constructed on both active and closed WMUs. They shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.

26. Prior to the anticipated rainy season, but no later than **October 1, annually**, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes. By **August 1, annually** the Discharger shall submit to the Executive Officer a Winterization Plan describing measures planned to prepare the site and conduct operations during the wet season. By **December 1, annually**, the Discharger shall submit a report to the Executive Officer describing measures taken to comply with this specification (the information may be included in the Annual Monitoring Report per the monitoring program).

27. Surface drainage shall be designed to minimize infiltration and shall not be allowed to contact wastes. Internal site drainage shall be located to the maximum extent practicable, such that they do not cross over landfill areas. Site drainage over landfill areas shall be contained in engineered conveyance structures or in drainage ditches which are lined with at least one foot of compacted soil having an in-place permeability of 1×10^{-6} or less.

28. New landfill units, existing landfill units, and lateral expansions thereof, shall not be located in the 100-year floodplain of any surface water unless the Discharger has successfully completed, and the Board has approved, all demonstrations required for such discharge under Subtitle D (40 CFR 258.11).

C. PROVISIONS

1. The Discharger shall comply with these WDRs and the attached MRP No. R1 2000-62. A violation of the MRP is a violation of these waste discharge requirements. The Discharger shall further comply with all applicable provisions of Title 27 and Subtitle D not specifically referred to in this Order.

2. The Discharger shall comply with the attached General Monitoring and Reporting Provisions, which are hereby incorporated into this Order. A violation of any of the standard provisions and reporting requirements is a violation of these waste discharge requirements.

3. Prior to landfill liner construction the discharger shall obtain any and all permits required under federal, state, or local laws.

4. Prior to landfill construction, with added maintenance as necessary during the operational life of the landfill, the Discharger shall implement the Wetlands Mitigation and Monitoring Program, and submit annual monitoring reports as described in MRP No.R1-2000-62, a part of this Order. The Discharger shall further conduct long term monitoring of wetlands created off-site pursuant to this plan and to MRP No. R1-2000-62. 2.6 acres of wetlands mitigation shall be fully functional and meet federal wetland delineation criteria by **December 31, 2005**.

The wetland mitigation site shall remain functional from this date through the life of this permit.

5. The Discharger shall maintain waste containment facilities and precipitation and drainage control systems throughout the post-closure maintenance period, and shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.

6. The Discharger shall continue to monitor each WMU and all underlying media per MRP No. R1-2000-62 throughout the post-closure maintenance period, and shall continue until the Board determines that the wastes remaining at the site no longer threaten water quality.

7. The Discharger shall have the continuing responsibility to assure protection of waters of the State from discharged wastes, including leachate, that may be generated and discharged during the closure, and post-closure maintenance period of the facility and during subsequent use of the property for other purposes.

8. The Discharger shall maintain legible records of the volume and type of each waste discharged for each landfill unit and the manner and location of discharge. Such records shall be maintained at the facility or the facility's administration office until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period for each of the landfill areas, copies of these records shall be sent to the Regional Board.

9. The Discharger shall provide proof to the Board **within sixty days after completing final closure** that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

   a. the parcel has been used as a municipal solid waste landfill;
   b. land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and
   c. in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

10. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP No. R1-2000-62, as required by Sections 13750 through 13755 of the California Water Code.

11. By **February 15, 2005,** the Discharger shall submit to the Board a preliminary closure and post-closure maintenance plan cost estimate, prepared in accordance with Section 21769 of Title 27. The plan shall include all information necessary for Board staff review and approval of financial assurance cost estimates for

closure and post-closure maintenance of each landfill submitted to the California Integrated Waste Management Board (CIWMB), pursuant to Sections 20950(f), and 22205 et seq. of Title 27.

12. The Discharger shall obtain and maintain adequate assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from a waste management unit at the facility in accordance with Sections 20380(b) and 22222 of Title 27. The Discharger shall provide an updated corrective action cost estimate to the Regional Board for review by **February 15, 2005,** and every five years thereafter, for the term of this permit. The Discharger shall demonstrate to the CIWMB and report to the Regional Board that it has established one of the acceptable financial assurance mechanisms described in Sections 22228 and 22240-22254 of Title 27 in at least the amount of the cost estimate approved by the Executive Officer, prior to waste placement in Landfill 2.

13. In the event the Regional Board determines that the County of Sonoma has failed or is failing to perform corrective action as required by law, the California Integrated Waste Management Board may direct the County of Sonoma to pay from the pledged revenue such amounts as necessary to insure sufficient corrective action. The County of Sonoma shall be obligated to use such funds for corrective action in accordance with the directive of the Regional Board.

14. In accordance with Title 27, the Discharger shall further provide and maintain adequate financial assurances to cover the costs of closure and post-closure maintenance for each waste management unit and shall report to the Regional Board by **February 15, annually,** that it has demonstrated financial responsibility to the CIWMB.

Water Quality Certification
Standard Conditions

15. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).

16. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

17. The validity of any non-denial certification action shall be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

18. There shall be no excavation in the live stream (flowing water). A detailed water diversion plan shall be submitted for approval prior to any work in the stream if water is flowing.

Additional Conditions

19. This project will require coverage under the greater NPDES Construction Stormwater permit, as a phase of development. A Stormwater Pollution Prevention Plan will need to be submitted 30 days in advance of construction which addresses this phase of development.

20. Regional Board staff require notification of project implementation 5 days in advance of any in-stream work.

Compliance Time Schedule

21. Pursuant to Section 13267 (b) of the CWC, the Discharger shall complete the tasks outlined in these WDRs and the attached MRP No. R1-2000-62 in accordance with the following time schedule:

Corrective Action for Landfill 1	**Compliance Date**
Submit workplan to address source reduction of leachate and active leachate extraction and elevation monitoring program.	December 31, 2000
Submit revised schedule for Final EMCAP report and recommendations for groundwater remedial action.	September 30, 2000
Submit Compost Deck engineered design to address infiltration and wet weather operation improvements for review and concurrence.	September 1, 2000, or prior to construction, whichever comes first
Submit workplan for the replacement/repair of groundwater monitoring well F-2.	September 30, 2000
Construction of Landfill 2 Expansion Phases	**Compliance Date**
Submit report of leachate pond repair, integrity test results, and quality assurance report for LP1 and LP2.	1 month prior to discharge of waste to Landfill 2
Submit implementation schedule for Leachate Long Term Management Plan.	September 30, 2000
Provide progress report on status of obtaining Leachate Long Term Management Plan.	Quarterly – due on the 15th day of the month following the reporting quarter
Submit Demonstration of implemented Leachate Long Term Management Plan.	1 month prior to waste placement in Landfill 2
Submit Demonstration of adequate Landfill Gas Migration Control to Landfill 2, Phase III footprint area.	6 months prior to construction of Phase III liner area
Submit landfill gas migration mitigation demonstration, monitoring results and any necessary plans for further mitigation.	Quarterly – due on the 15th day of the month following the reporting period

Submit design phasing plans, specifications, construction schedule, and quality assurance plan for the liner system.	1 month prior to start of each Phase.
Submit Construction Quality Assurance (CQA) status reports. Reports are to include a general location and statement of adequate quantity and quality of low permeability soils and suitable materials report for all soil liner construction materials.	2 weeks prior to the start of each liner construction sequence, and monthly, thereafter until the certification report is submitted.
Submit as-built plans, CQA and certification report for each completed area of liner.	2 weeks prior to waste placement or as provided in monthly CQA status reports, which ever comes first.
Submit Demonstration of combined Landfill 1 and Landfill 2 updated Financial Assurance for Known or Foreseeable Release.	1 month prior to waste placement in Landfill 2, or by February 15, 2001, whichever comes first

22. A copy of this Order shall be kept at the discharge facility for reference by operating personnel at all times. Key operating personnel shall be familiar with its contents.

23. The Board will review this Order periodically and will revise these requirements when necessary.

24. Severability

Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

25. Operation and Maintenance

The Discharger must maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.

26. Change in Discharge

The Discharger must promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.

27. Change in Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger must

notify the succeeding owner or operator of the following items by letter, a copy of which must be forwarded to the Regional Water Board:

a. existence of this Order, and
b. the status of the dischargers' annual fee account

28. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from his liability under federal, State, or local laws, nor create a vested right for the discharger to continue the waste discharge.

29. Accidental Spills, Incident Reporting and Monitoring

The Discharger must comply with the Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program No. R1-2000-62 and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Order and incorporated herein. Chemical, bacteriological, and bioassay analyses must be conducted at a laboratory certified for such analyses by the State Department of Health Services.

a. Order No. 74-151 requires immediate incident reporting of unintentional or accidental spills (including Emergency Response actions) and diligent action to abate the effects of the discharge. Written confirmation of the incident is required within two weeks of notification.

b. General Monitoring and Reporting Provisions require sampling and analysis performance criteria in addition to compliance reporting criteria and timeframes.

30. Inspections

The Discharger shall permit authorized staff of the Regional Water Board:

a. entry upon premises in which an effluent source is located or in which any required records are kept;
b. access to copy any records required to be kept under terms and conditions of this Order;
c. inspection of monitoring equipment or records; and
d. sampling of any discharge.

31. Noncompliance

In the event the discharger is unable to comply with any of the conditions of this Order due to:

a) breakdown of waste management equipment;

b) accidents caused by human error or negligence; or
c) other causes such as acts of nature;

the Discharger must notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

32. Revision of Requirements

The Regional Water Board will review this Order periodically and may revise requirements when necessary.

33. Adequate Capacity and Future Waste Management Units

Whenever a waste management unit will reach capacity within four years, the discharger shall notify the Regional Water Board in writing. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies, and the press. The discharger must demonstrate that adequate steps are being taken to address any capacity concerns. The Discharger shall submit a technical report to the Regional Water Board showing how fill volumes will be cell-sequenced for the remaining capacity and a schedule for reaching final elevations. The Discharger shall also submit a technical report summarizing the status of planned or future waste management units. Should the Discharger wish to pursue the "future" landfill expansion units, including the Rock Extraction Project and the West Canyon Landfill, a "Siting Element" proposal inclusive of required fault studies and groundwater investigations, etc. shall be submitted for review and concurrence within 60 days of notification. Once approved, the study shall be performed, as required under Title 27, CCR. The required investigation shall be initiated within 120 days of concurrence with the study. Should the Discharger choose to abandon plans for future expansion units, the Discharger shall report as much under the specified time frames above. This later demonstration must include a schedule for the construction closure of the site and discussion of plans to divert the municipal waste stream to another legal point of disposal following closure. The time frame for filing the required technical report may be extended in writing by the Executive Officer for good cause.

Certification

I, Lee A. Michlin, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on August 25, 2000.

Lee A. Michlin
Executive Officer

(centraswdswdrs800revised)

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2000-62

FOR

COUNTY OF SONOMA
CENTRAL LANDFILL
AND
EAST CANYON EXPANSION UNIT
SOLID WASTE DISPOSAL SITE

CLASS III LANDFILLS

The Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and corrective action, and that comply with Subchapter 3, Chapter 3, Subdivision 1, Division 2, Title 27, CCR, and any other applicable provisions therein.

Compliance with this Monitoring and Reporting Program (MRP), and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements (WDRs) Order No. R1-2000-62. Failure to comply with this MRP, or with the General Monitoring and Reporting Requirements, constitutes non-compliance with the WDRs and with Division 7 of the Water Code, which can result in the imposition of civil monetary liability.

I. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the General Monitoring and Reporting Requirements. Reports which do not comply with the required format will be rejected and the Discharger shall be deemed to be in noncompliance with the WDRs.

A narrative discussion of the monitoring results, including notations of any water quality violations shall precede tabular summaries of the water quality data. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually and submitted within the Annual Report. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data.

The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board in the monitoring report(s) for that period.

A. REQUIRED REPORTS

1. Detection Monitoring Report

Detection Monitoring Reports (DMRs) shall be prepared and submitted to the Board quarterly by the 15th day of the month following the end of each calendar quarter. The

reports shall include the results of all monitoring programs listed herein. The established monitoring and reporting period is as follows:

QUARTER	QUARTER No.	REPORTING DATE
February, March, April	2	May 15
May, June, July	3	August 15
August, September, October	4	November 15
November, December, January	1	February 15 Annual Report date

2. Annual Report

An Annual Report, which summarizes the monitoring results for the prior four quarters, shall be submitted to the Board **by February 15, annually**. The report shall contain both tabular and graphical summaries of the detection and corrective action monitoring data and a discussion of the progress toward re-establishment of compliance with WDRs and the Water Quality Protection Standard (WQPS). In lieu of submitting a separate report, the Annual Report information may instead be included with the first quarter Detection Monitoring Report. The Annual Report shall also include the results of the soil gas monitoring program.

3. Wetlands Mitigation and Monitoring

The results of monitoring conducted pursuant to the Wetlands Mitigation and Monitoring Plan (WMMP), as approved by Board staff, shall be submitted **by December 31, annually**. In addition to reporting the monitoring results, the report shall narrative descriptions, and summaries of mitigation and preservation activities and any maps, as needed, showing areas of remedial activities. Final wetlands delineations maps shall be provided in accordance with the WMMP and the outlined 5 years completion schedule.

4. Water Quality Protection Standard Report

As noted above, any changes to the water quality protection standard are to be included in the Annual Report.

5. Constituents-of-Concern (COC)

The results of COC monitoring shall be submitted with, or reported in, the Annual Report for that year.

6. Notification of Release and Re-test

For any WMU, if the results of a detection monitoring program shows that there is a measurably significant increase in an indicator parameter or waste constituents over the WQPS at or beyond the points of compliance (i.e., measurably significant evidence of an exceedence or release), the Discharger shall:

a. immediately notify the Regional Board by telephone or fax of the exceedence,

b. within seven days of the initial findings, follow up with written notification (or acknowledgment of the Board's finding),

c. within 30 days of the initial finding, re-sample for the constituent(s) or parameter(s) at the point where the standard was exceeded, and

d. within 60 days of the initial finding, submit the results of the re-sampling and statistical analysis, indicating whether or not an exceedence or release was confirmed by the re-test.

7. Existing Release - Amended Programs

Within 30 days upon confirmation of an exceedence from an existing release, the Discharger shall submit for Board staff approval an amendment to the Corrective Action Program, describing measures planned or taken to mitigate the exceedence. The discharger shall also note any necessary changes to the DMP and Corrective Action Monitoring Program monitoring locations as a result of the exceedence (see Section V.C. herein).

8. Responding to a Release Discovery

Upon verifying a measurably significant evidence of a release from a WMU according to Section 20420(j) of Title 27 and Section A.6 of this MRP, the Discharger shall follow the procedures and timeline described in Section 20420(k) of Title 27.

II. MONITORING PROGRAMS

A. SOLID WASTE MONITORING

The Discharger shall monitor monthly all wastes discharged to each WMU in Landfills 1 and 2 and report quarterly as follows:

Table II.A: Nonhazardous Solid Waste Monitoring

Parameter	Units	Monitoring Frequency	Reporting Frequency
Quantity discharged	cubic yards or tons	Monthly	Quarterly
Type of material discharged	---	Monthly	Quarterly
Cell sequencing plan	---	Monthly	Quarterly
Capacity of each landfill/phase remaining	percent	Monthly	Annually

B. ROUTINE MAINTENANCE

The disposal site shall be inspected weekly. At a minimum, the integrity of the cover material, drainage structures, potential erosion areas, and leachate piping and storage facilities shall be inspected. Inspection logs, problem areas, special occurrences, and corrective actions taken shall be included in quarterly monitoring reports.

C. CONSTITUENTS OF CONCERN

Except as otherwise indicated in this Order, the Discharger shall monitor each media of each new and existing landfill unit for applicable Constituents of Concern (per federal Subtitle D, Appendix II and State Water Resources Control Board Resolution 93-62). The monitoring locations, analytical methods, and frequency of analysis are as follows:

1. Monitoring Locations

a. Leachate - Landfill 1 LCRS Sump, Landfill 2 LCRS sump, Landfill 2 underdrain discharge, Leachate Pond 1(LP1) and Leachate Pond 2 (LP2) as identified in Table II.C.1

b. Groundwater – all groundwater monitoring wells

c. Unsaturated zone

ii) landfill gas - a representative gas probe for Landfill 1, Landfill 2, and temporary probes TMP1, TMP2 and TMP3 as per Table II.B, below, and as shown on Attachment F.

2. Monitoring Schedule

TABLE II.B
CONSTITUENTS OF CONCERN MONITORING

Constituents of Concern	Units	Frequency
Carbonate	mg/L	**Every 5 years**
Bicarbonate Alkalinity	mg/L	**Every 5 years**
Volatile Organic Compounds (EPA Method 8260)	ug/L	**Every 5 years**
Semi-Volatile Organic Compounds (EPA Method 8270)	ug/L	**Every 5 years**
Organochlorine Pesticide, PCBs (EPA Method 8080)	ug/L	**Every 5 years**
Chlorophenoxy Herbicides (EPA Method 8150)	ug/L	**Every 5 years**
Organophosphorus Compounds (EPA Method 8141)	ug/L	**Every 5 years**
Inorganics (dissolved)	mg/L	**Every 5 years**
MTBE	ug/L	**Every 5 years**
UNSATURATED ZONE		
Volatile Organic Compounds (EPA Method TO14)	ppb/v	**Every 5 years**
Methane	ppb/v	**Every 5 years**

D. LEACHATE MONITORING

1. Monitoring Locations

The leachate monitoring locations within each Waste Management Unit (WMU) shall be as follows:

TABLE II.C.1
LEACHATE MONITORING LOCATIONS

WMU	Location	Elevations ft. below surface
Landfill 1	Well/Sump	Ft/tenths
Landfill 1	LEW-1	Ft/tenths
Landfill 1	LEW-2	Ft/tenths
Landfill 1	Well 60	Ft/tenths
Landfill 1	Well 9	Ft/tenths
Landfill 1	Well 66	Ft/tenths
LP1	LCRS-Sump	Presence of liquid
LP2	LCRS-Sump	Presence of liquid
Landfill 2	Underdrain	gpm

2. Monitoring Schedule

Leachate monitoring shall be conducted as specified in Table II.C.2.

TABLE II.C.2
LEACHATE MONITORING PROGRAM

Parameter	Units	Frequency	Reporting
Field Parameters			
Freeboard, LP1, LP2	Feet/tenths	Daily	Monthly
Landfill 2 underdrain	gpm	Monthly	Monthly
Volume outhauled	Gallons	Daily	Monthly
Specific Conductance	mhos/cm	Quarterly	Quarterly
pH	pH units	Quarterly	Quarterly
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L	Quarterly	Quarterly
Chlorides	mg/L	Quarterly	Quarterly
Fluoride	mg/L	Quarterly	Quarterly
COD	mg/L	Quarterly	Quarterly
Sodium	mg/L	Quarterly	Quarterly
Mineral series	mg/L	Quarterly	Quarterly
Nitrogen series	mg/L	Quarterly	Quarterly
CAM metals	mg/L	Quarterly	Quarterly
Sulfates	mg/L	Quarterly	Quarterly
Volatile Organic Compounds	ug/L	Quarterly	Quarterly
Constituents of Concern			
Table II.B constituents	ug/L	Annually	Annually

Upon detection of leachate in a previously dry LCRS sump, the leachate shall be sampled in accordance with the above schedule and the results included in the monitoring report. If COC constituents are detected that are not already Monitoring

Parameters, then the leachate must be re-sampled for those constituents. If confirmed by re-test, then these constituents must be added to the Monitoring Parameter list and analyzed on a quarterly basis.

All visible portions of synthetic liners shall be inspected on a monthly basis. Each LCRS shall be hydraulically tested annually to demonstrate that it is still operating in conformance with the WDRs. The results shall be reported to the Board in the Annual Report and include comparison with earlier tests made under comparable conditions.

E. GROUNDWATER ELEVATION MONITORING

Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the groundwater gradient/direction analyses required. For each monitored groundwater body, the Discharger shall measure the water level in each well and determine groundwater gradient and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. Groundwater elevations for all upgradient and downgradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the quarterly monitoring reports.

F. WETLANDS MITIGATION AND MONITORING

The Discharger shall monitor wetlands in accordance with the Wetlands Mitigation and Monitoring Plan (WMMP), as approved by Board staff and included in the Joint Technical Document and Final Environmental Impact Report. Monitoring shall be conducted for a sufficient number of years to ensure that all wetlands created on-site survive for the long term, and shall be discontinued only upon revision of this MRP. The results of monitoring shall be submitted by **December 31, Annually**.

III. DETECTION MONITORING

A. GENERAL

The Discharger shall perform Detection Monitoring on all media potentially affected by a release, including surface water, groundwater, and the unsaturated zone. For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

The Discharger shall use a Board-approved statistical (or non-statistical) procedure to determine whether there has been a measurably significant increase in a constituent over the water quality protection standard, as set forth in Section 20415(e)(5) of Title 27.

B. UNSATURATED ZONE

The Landfill Gas Monitoring Reports conducted quarterly for the CIWMB and LEA shall be copied to this agency. Temporary Landfill Gas Probes TMP1, TMP2, and TMP3 shall be added to the quarterly monitoring program until such time as it is no longer needed and written concurrence is obtained from Regional Board staff.

C. GROUNDWATER

The groundwater surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured on a quarterly basis and used to determine the velocity and direction of groundwater flow. This information shall be displayed on a water table contour map and/or groundwater flow net for the site and included in the quarterly monitoring reports. Additional monitoring wells shall be added to the program as needed.

1. Monitoring Locations

The groundwater detection monitoring points for Landfill 1 and Landfill 2, shown in Attachment E, are as follows:

Background Monitoring Wells:

Landfill 1	MW1, F-12,
Landfill 2	F-14, F-15, and F-16

Downgradient Monitoring Wells:

Landfill 1	A-2, A-3, HA-1, HA-2, F-2, F-3, F-8, F-11, F-13, ST1W-1, ST1W-2, and ST1W-3.
Landfill 2	A1, F-11, F-17, F-18, and F-19

Points of Compliance Wells:

Landfill 1	A-2, A-3, HA-II, HA-I, F-2, F-3, F-8, F-11, F-13, ST1W-1, ST1W-2, and ST1W-3
Landfill 2	A1, F11, F-17, F-18 and F-19

Any additional monitoring wells constructed at the site shall be added to the monitoring network. Samples shall be collected from all installed wells at the frequency and for the parameters specified in Table II.

2. Monitoring Schedule

The analytes and frequency of groundwater monitoring is as follows:

TABLE III.C.1
GROUNDWATER DETECTION MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
pH	pH units	Quarterly
Specific Conductance	Mhos/cm	Quarterly
Temperature	°C	Quarterly
Groundwater Elevations	Ft./tenths TOC	Quarterly
Dissolved Oxygen	mg/L	Quarterly
Turbidity	Turbidity units	Quarterly
Monitoring Parameters		
Sodium	mg/L	Quarterly
Magnesium	mg/L	Quarterly

Calcium	mg/L	Quarterly
Iron	mg/L	Quarterly
Speciated Alkalinity	mg/L	Quarterly
Floride	mg/L	Quarterly
Manganese	mg/L	Quarterly
Total Dissolved Solids (TDS)	mg/L	Quarterly
Chlorides	mg/L	Quarterly
Sulfates	mg/L	Quarterly
Nitrogen Series	mg/L	Quarterly
Halogenated VOC's	ug/L	Quarterly
Aromatic VOC's	ug/L	Quarterly
CAM Metals	mg/L	Annually
Constituents of Concern		
Table II.B constituents	ug/L	Every 5 years

D. SURFACE WATER MONITORING

1. Monitoring Locations

Both unnamed tributaries flowing into Stemple Creek shall be sampled at the property boundary at locations SW1 and SW6, in addition to background station "Ditch". Locations SW-1 and SW-6 as shown in Attachment E, constitute the point of compliance for surface waters for both landfill units.

2. Monitoring Schedule

Surface water monitoring shall be conducted as specified in Table III.D. below. Sampling shall begin with the first surface runoff in the fall of each year and continue monthly until surface runoff ceases in the dry season.

TABLE III.D.
SURFACE WATER MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
Dissolved Oxygen	mg/L	Monthly
Hardness (as $CaC0_3$)	mg/L	Monthly
Specific Conductance	mhos/cm	Monthly
pH	pH units	Weekly
Temperature	°C	Weekly
Ammonia	mg/L-grab	Weekly
Unionized Ammonia	mg/L-grab	Weekly
Turbidity	Turbidity Units	Monthly
Total Precipitation	In/days	Monthly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Monthly
Total Settable Solids	mg/L	Monthly
Total Suspended Solids	mg/L	Monthly
Ammonia	mg/L	Monthly

Bicarbonate	mg/L	Monthly
Chlorides	mg/L	Quarterly
Sulfates	mg/L	Quarterly
Nitrogen Series	mg/L	Quarterly
Carbonate	mg/L	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Annually
Total Organic Carbon (TOC)	mg/L	Annually
Biological Oxygen Demand (BOD)	mg/L	Annually
Bioassay Test (96 hr.)	% survival	Annually
CAM Metals	mg/L	Annually
Constituents of Concern		
Table II.B constituents	mg/L	Every 5 years

The Discharger shall determine at each sampling whether there is a statistically or non-statistically significant increase over water quality protection standards for each parameter and constituent analyzed. If a release is detected at the downstream sampling point, the Discharger shall proceed with an Evaluation Monitoring Program to determine the source(s) and extent of the release.

IV. CORRECTIVE ACTION

The following information shall be gathered annually as to the progress of groundwater remediation and reported in the format of Table IV.A.2 below:

A. CORRECTIVE ACTION MONITORING

1. Monitoring Locations

The corrective action monitoring points for Landfill 1, shown in Attachment E, are as follows:

TABLE IV.B.1
CORRECTIVE ACTION MONITORING LOCATIONS

WMU	Source Area	Monitoring Wells
Landfill 1	Upper Canyon	F5
Landfill 1	Toe Area	F10, MW3A, MW3R,

List includes former detection monitoring wells impacted by the spread of contaminants.
Additional well(s) may be needed.

2. Monitoring Schedule

The monitoring schedule for the corrective action wells is as follows:

TABLE IV.B.2
CORRECTIVE ACTION MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
pH	pH units	Quarterly
Specific Conductance	mhos/cm	Quarterly
Temperature	°C	Quarterly
Turbidity	Turbidity units	Quarterly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Quarterly
Chlorides	mg/L	Quarterly
Sulfates	mg/L	Quarterly
Nitrate – Nitrogen	mg/L	Quarterly
Volatile Organic Compounds	ug/L	Quarterly
Constituents of Concern		
Table II.B constituents	ug/L	Annually

V. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) consists of the following elements:

A. Constituents of Concern;
B. Concentration Limits;
C. Monitoring Points;
D. Points of Compliance; and
E. Compliance Period.

Each of these is described as follows:

A. Constituents of Concern

The Constituents of Concern (COCs) required under Section 20395 of Title 27 shall include all constituent groups identified in Table II.B and specifically listed in Appendix II Subtitle D. The Discharger shall monitor all COCs every five years or more frequently as required under the corrective action monitoring program.

B. Concentration Limits

1. General

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium (i.e., the uppermost aquifer) at a landfill shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

a. The background value established in the WDRs by the Board for that constituent and medium;

b. The constituent's background value, from the Background Monitoring Points for that monitored medium. Either:

(1) The mean (or median, as appropriate) and standard deviation (or other measure of central tendency, as appropriate) of the constituent's background data; or

(2) The constituent's MDL, in cases where less than 10 percent of the background samples exceed the constituent's MDL; or

c. A concentration limit greater than background, as approved by the Board for use during or after corrective action.

2. **Groundwater** - background values established by monitoring.

3. **Surface Water** - Concentration limits for SW-1 and SW-6 shall be calculated for the background monitoring point, "Ditch".

These values, and the statistical or non-statistical methods upon which they are based, are subject to ongoing review and approval by Board staff. In addition, they shall be updated as necessary to provide ongoing definition of background water quality.

C. Monitoring Points

1. **Unsaturated Zone** - The discharger shall submit copies of quarterly gas monitoring reports for all landfill gas probes monitored in accordance with the Solid Waste Facilities Permit issued by the CIWMB.

2. **Groundwater** - As listed in Tables III.C. for Landfill's 1 and 2, respectively.

3. **Surface Water** - As described in Section III.D.

Upon confirmation of an exceedence from an existing release, the Discharger shall transfer the impacted monitoring point(s) from the Detection Monitoring Program (DMP) to the Corrective Action Monitoring Program (CAMP). Upon confirmation that levels in a previously impacted monitoring point has been reduced below concentration limits, the Discharger may, with Board staff approval, transfer that monitoring point from the CAMP to the DMP.

D. Points of Compliance

The point(s) of compliance at each groundwater monitoring point is the vertical surface located at the downgradient limit of the WMU that extends through the uppermost aquifer underlying the WMU. These points correspond to the corrective action wells on the southern and southwestern periphery of the landfill along Hammel Road. The point of compliance for surface water monitoring shall be SW-1 and SW-6.

E. Compliance Period

The Compliance period is the number of years equal to the active life of the landfill plus the closure period. Each time the Standard is exceeded (i.e., a release is discovered), the landfill begins a Compliance Period on the date the Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the landfill has been in continuous compliance for at least three consecutive years.

The Discharger shall implement the above monitoring program on the effective date of this Order.

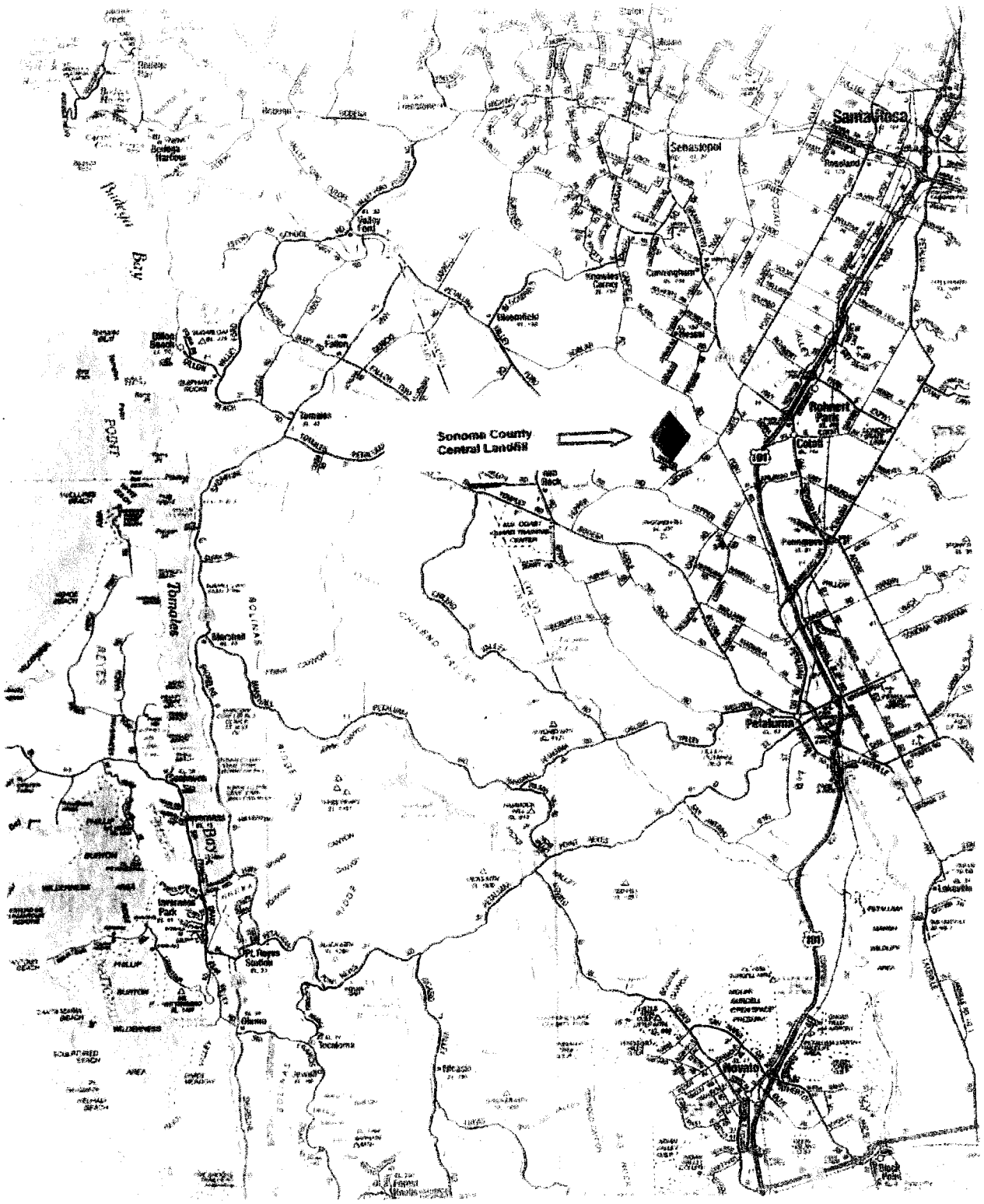
Ordered by: _____

Lee A. Michlin,
Executive Officer

August 25, 2000

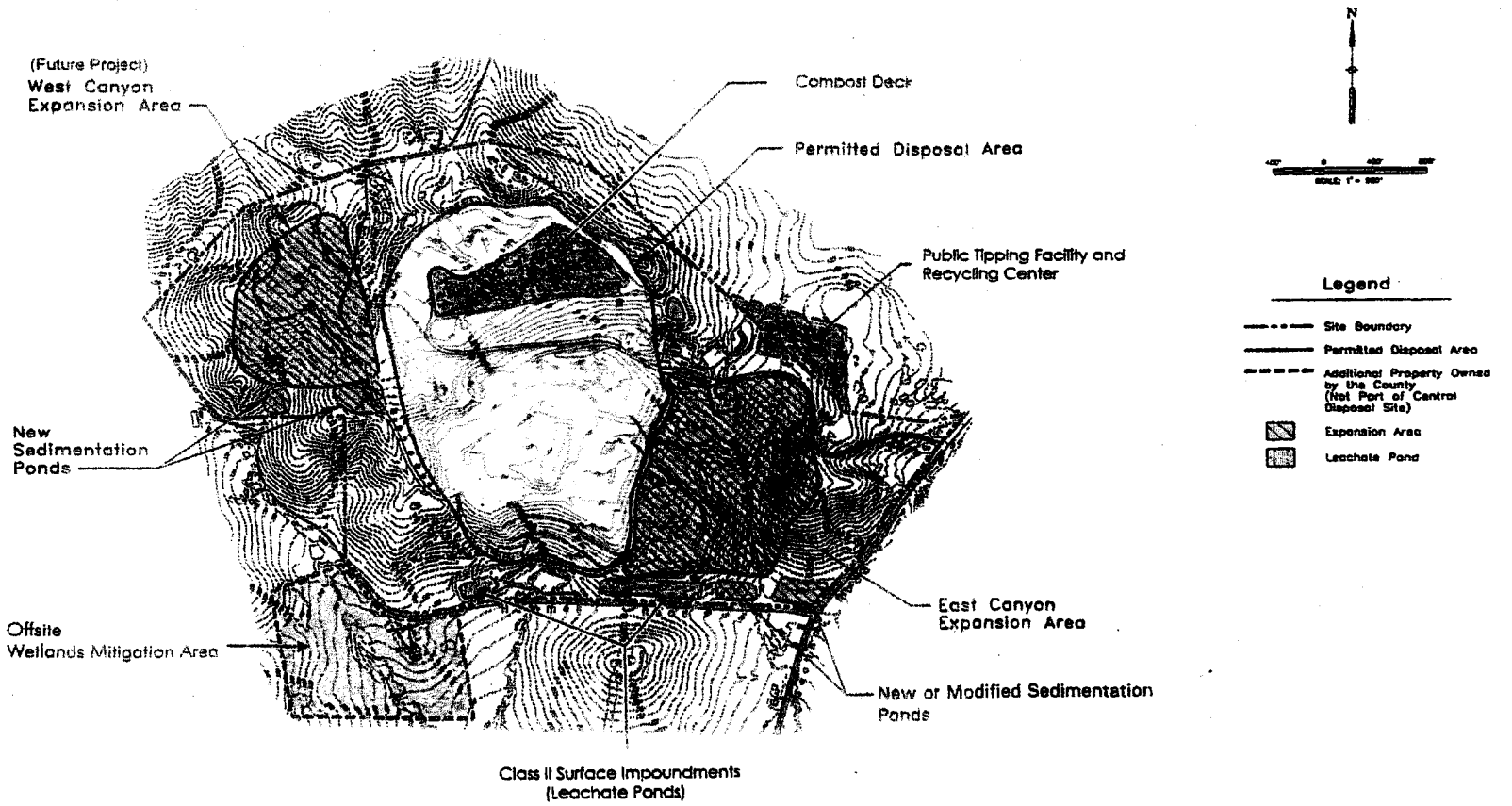
(centralm&r700revised)

Attachment A



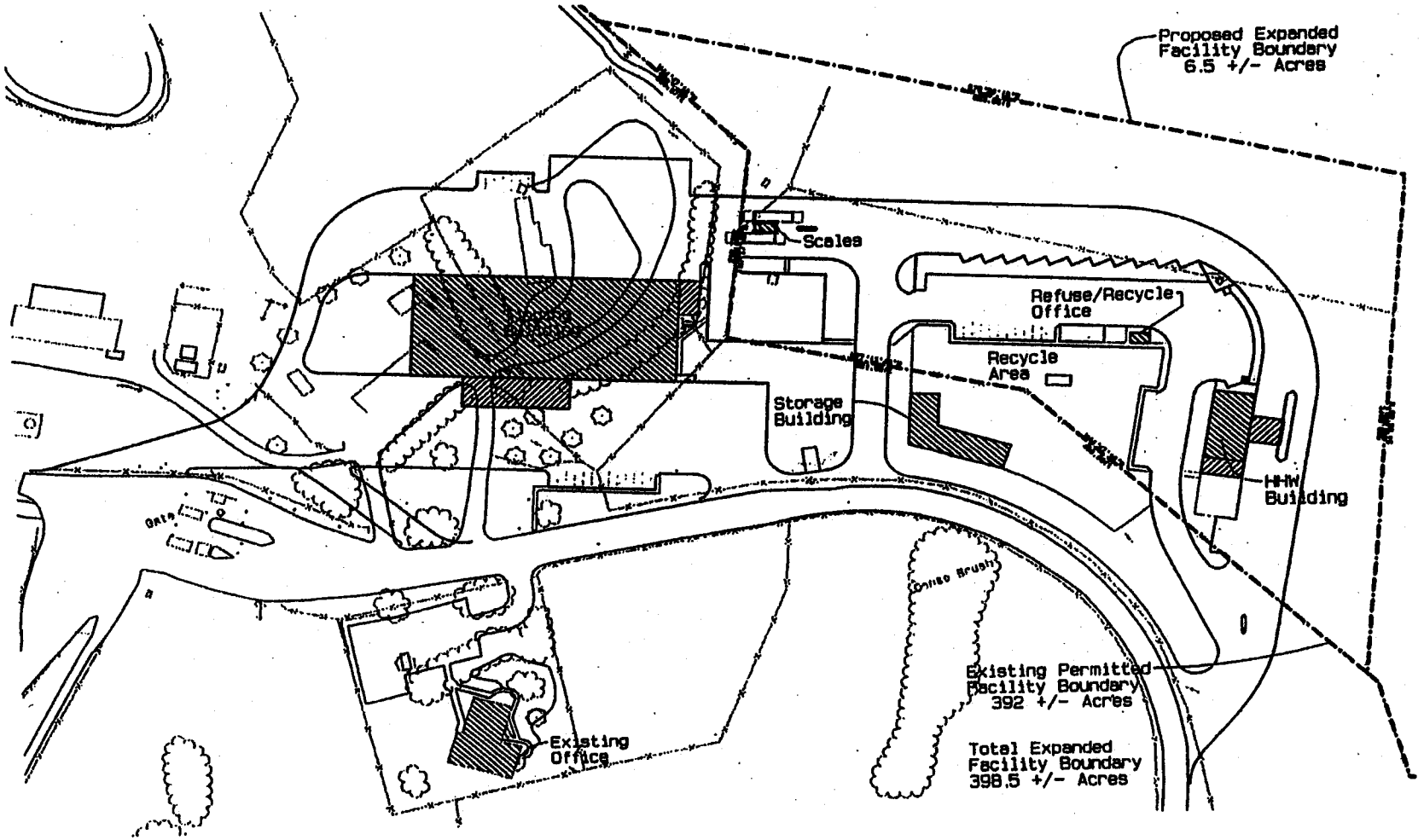
Site Location Map

Attachment B



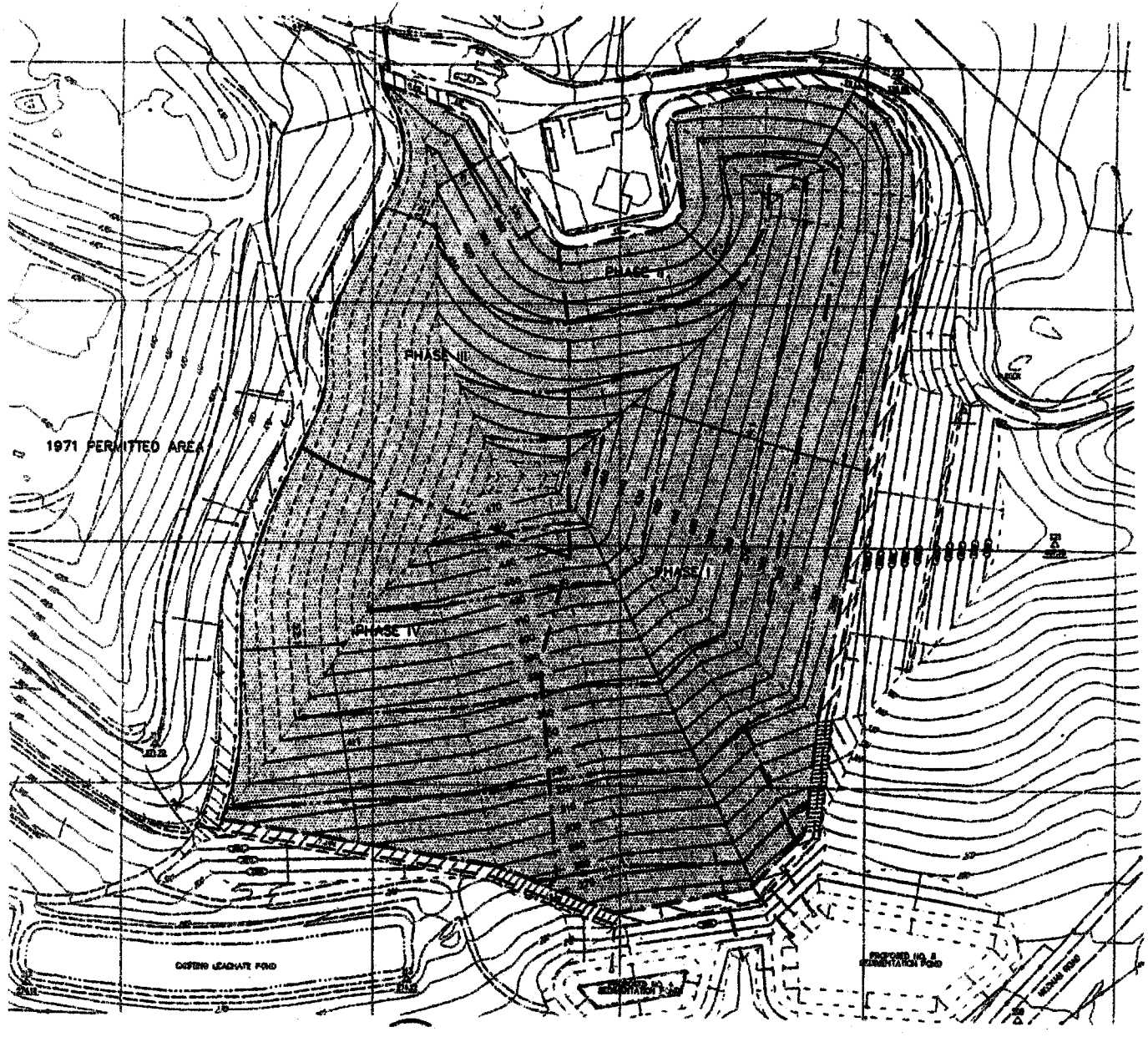
Central Landfill Site Map

Attachment C



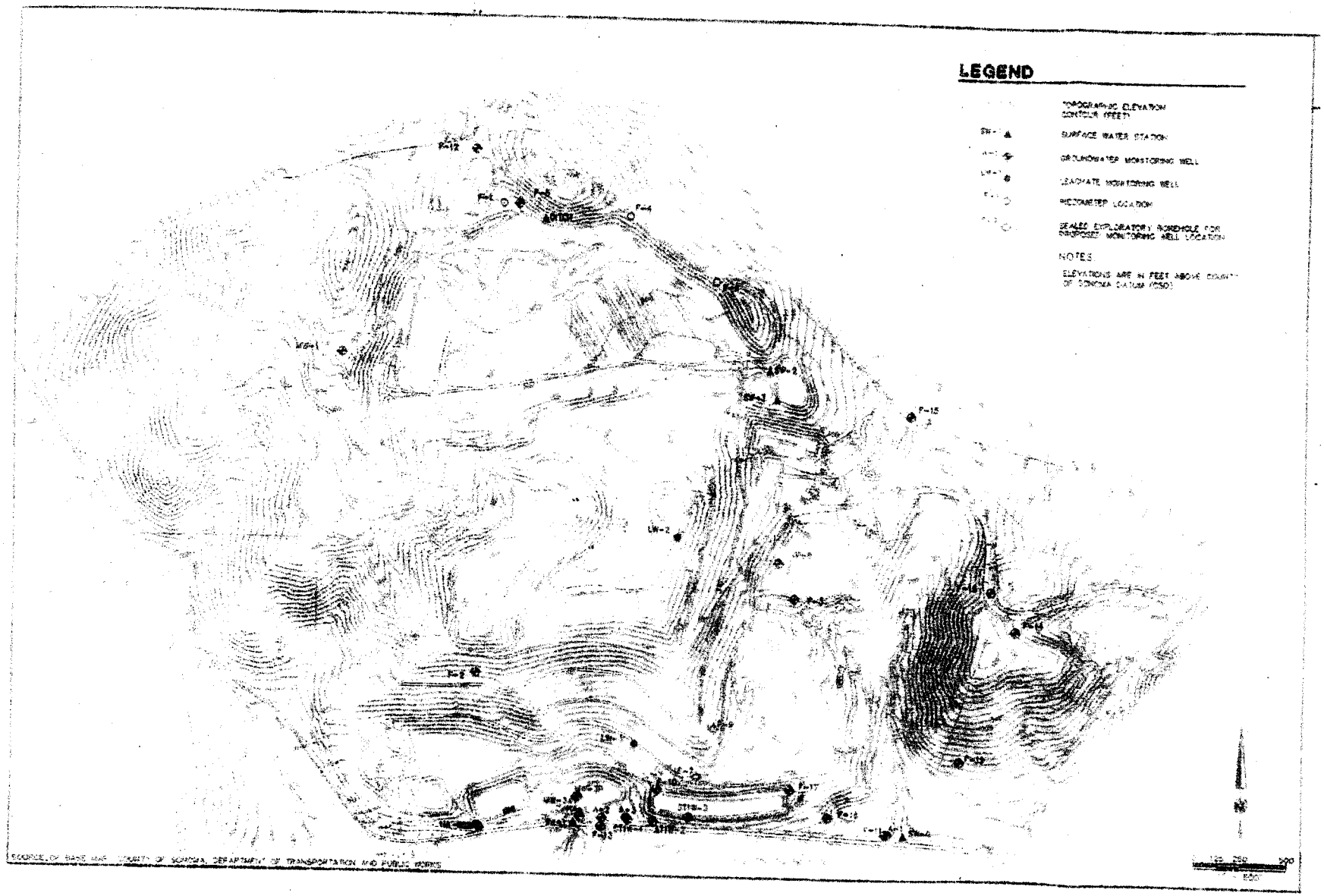
Site Improvements

Attachment D



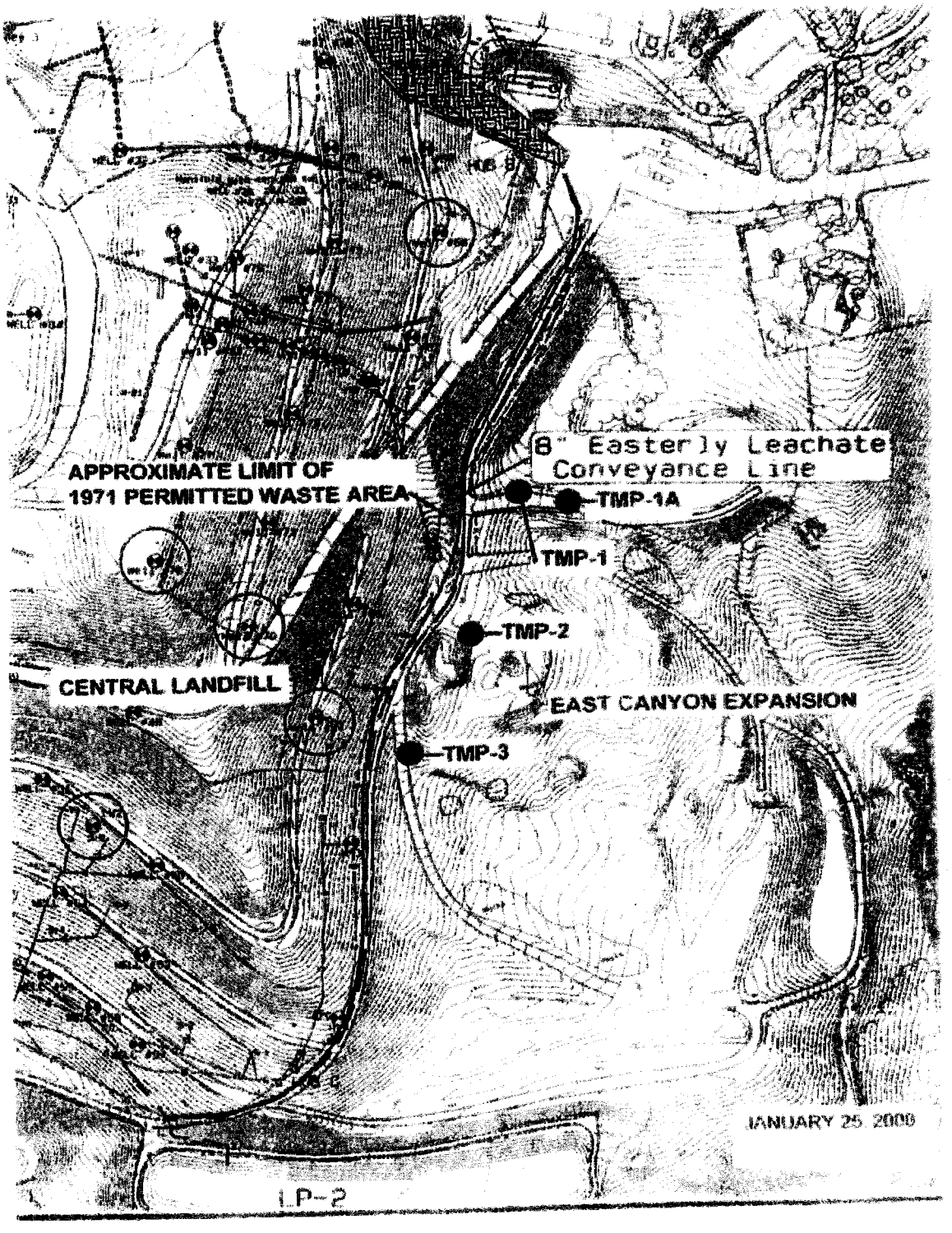
East Canyon Phases

Attachment E



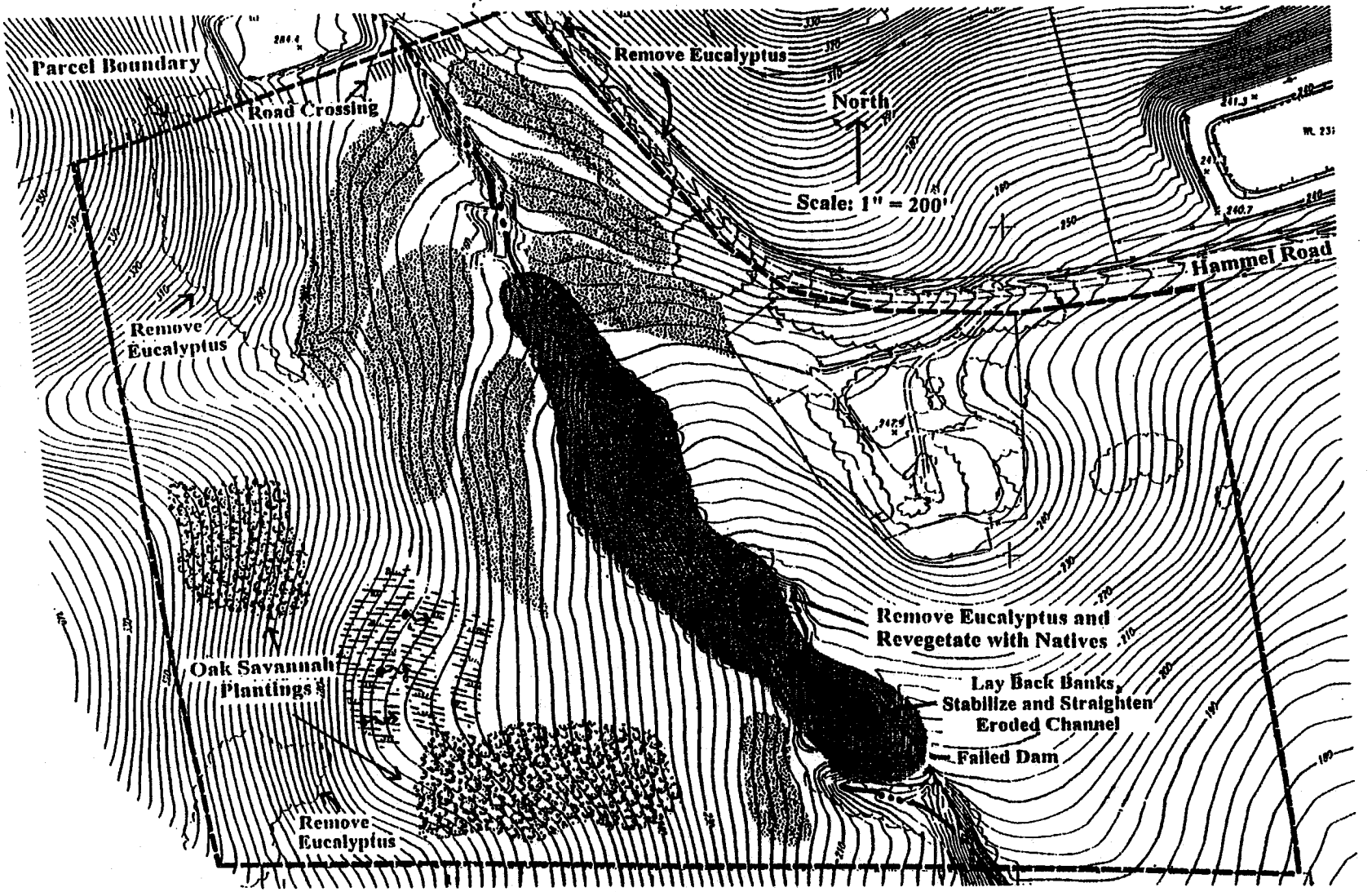
Surface and Groundwater Monitoring Sites

Attachment F



East Canyon Landfill Gas Monitoring Probes

Attachment G



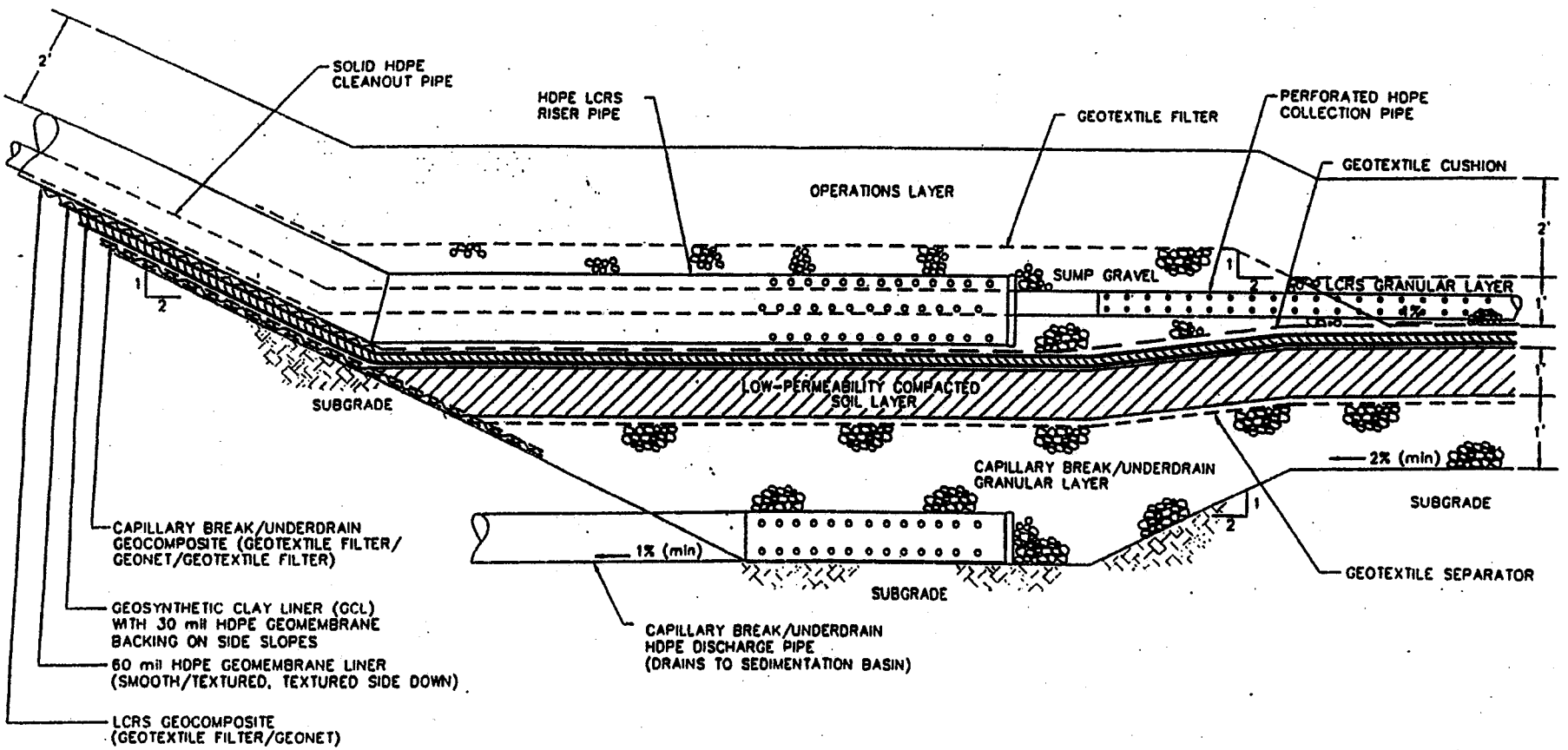
Required Mitigation Areas

= Seasonal Wetland Features

= Frog Habitat Features

Wetlands Mitigation Site

Attachment H



Engineered Alternative Liner System

California Regional Water Quality Control Board
North Coast Region

CONTINGENCY PLANNING AND NOTIFICATION REQUIREMENTS

FOR

ACCIDENTAL SPILLS AND DISCHARGES

ORDER NO. 74-151

The California Regional Water Quality Control Board, North Coast Region, finds that:

1. Section 13225 of the Porter-Cologne Water Quality Act requires the Regional Board to perform general duties to assure positive water quality control.

2. The Regional Board has been advised of situations in which preparations for, and response to accidental discharges and spills have been inadequate.

3. Persons discharging waste or conveying, supplying, storing, or managing wastes or hazardous materials have the primary responsibility for contingency planning, incident reporting and continuous and diligent action to abate the effects of such unintentional or accidental discharge.

THEREFORE, IT IS HEREBY ORDERED THAT:

I. All persons who discharge wastes or convey, supply, store, or otherwise manage wastes or other hazardous material shall:

A. Prepare and submit to this Regional Board, according to a time schedule prescribed by the Executive Officer, a contingency plan defining the following:

1. Potential locations and/or circumstances under which accidental discharge incidents might be expected to occur,

2. Possible water quality effects of accidental discharges,

3. The conceptual plan for cleanup and abatement of accidental discharge incidents, including:

a. The individual who will be in charge of cleanup and abatement activities on behalf of the discharger,

b. The equipment and manpower available to the discharger to implement the cleanup and abatement plans,

B. Immediately report to the Regional Board any accidental discharge incidents. Such notification shall be made by telephone as soon as the responsible person or his agent has knowledge of the incident.

C. Immediately begin diligent and continuous action to cleanup and abate the effects of any unintentional or accidental discharge. Such action shall include temporary measures to abate the discharge prior to completing permanent repairs to damaged facilities.

D. Confirm the telephone notification in writing within two weeks of the telephone notification. The written notification shall include: reasons for the discharge, duration and volume of the discharge, steps taken to correct the problem and steps being taken to prevent the problem from recurring.

II. Upon original receipt of phone report (I.B.), the Executive Officer shall immediately notify all affected agencies and known users of waters affected by the unintentional or accidental discharge.

III. Provide updated information to the Regional Board in the event of change of staff, size of the facility, or change of operating procedures which will affect the previously established contingency plan.

IV. The Executive Officer or his employees shall maintain liaison with the discharger and other affected agencies and persons to provide assistance in cleanup and abatement activities.

V. The Executive Officer shall transmit copies of this Order to all persons whose discharges of waste handling activities are governed by Waste Discharge Requirements or an NDPES permit. Such transmittal shall include a current listing of telephone numbers of the Executive Officer and his key employees to facilitate compliance with Item I.B of this Order.

Ordered by _____
Benjamin D. Kor
Executive Officer

July 24, 1974
(Retyped February 15, 1990)

Your primary notification should be to the Regional Board office in Santa Rosa at (707) 576-2220. During off hours, you will be able to leave a recorded message at that number and, if you have a spill or discharge emergency, you will also be referred to the State Office of Emergency Services (OES) at (800) 852-7550. OES maintains a roster of key employees and will relay your notification to Regional Board staff.

California Regional Water Quality Control Board
North Coast Region

GENERAL MONITORING AND REPORTING PROVISIONS

February 3, 1971
(Retyped May 20, 1993)

GENERAL PROVISIONS FOR SAMPLING AND ANALYSIS

Unless otherwise noted, all sampling, sample preservation, and analyses shall be conducted in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water" or approved by the Executive Officer.

All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health or a laboratory approved by the Executive Officer.

All samples shall be representative of the waste discharge under the conditions of peak load.

GENERAL PROVISIONS FOR REPORTING

For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge in full compliance with requirements at the earliest time and submit a timetable for correction.

By January 30 of each year, the discharger shall submit an annual report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

The discharger shall file a written report within 90 days after the average dry weather flow for any month that equals or exceeds 75 percent of the design capacity of the waste treatment or disposal facilities. The report shall contain a schedule for studies, design, and other steps needed to provide additional capacity or limit the flow below the design capacity prior to the time when the waste flow rate equals the capacity of the present units.

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 93-100

CLARIFICATION OF APPLICABLE DEADLINES FOR IMPLEMENTATION OF FEDERAL REQUIREMENTS FOR DISCHARGES OF MUNICIPAL SOLID WASTE

WHEREAS:

1. The United States Environmental Protection Agency (**USEPA**) has promulgated nationwide standards for location, design, operation, monitoring, closure, and post-closure maintenance at municipal solid waste landfills (**MSW landfills**) pursuant to Subtitle D of the Resource Conservation and Recover Act (42 USC 6901, *et seq.*, at 6940, *et seq.*), most of which were scheduled to take effect on October 9, 1993;

2. The Board adopted Resolution No. 93-62, entitled "***Policy For Regulation Of Discharges Of Municipal Solid Waste***", requiring Regional Water Quality Control Boards to revise the Waste Discharge Requirements of all dischargers owning or operating MSW landfills that had received solid waste after October 9, 1991, by the "Federal Deadline" to bring such Waste Discharge Requirements into full compliance both with the State Water Board's regulations governing discharges of waste to land (Chapter 15 of Division 3 of Title 23 of the California Code of Regulations, 23 CCR 2510 *et seq.*, "**Chapter 15**") and with the "**federal MSW regulations**" (40 CFR Part 258); and

3. The USEPA has extended the Federal Deadlines for compliance with certain portions of the federal program (e.g., containment systems, monitoring, and financial assurance) for certain categories of dischargers (e.g., where the subject MSW landfill receives less than 100 tons per day), while maintaining the previous Federal Deadline schedule for certain other discharger categories (e.g., where the subject MSW landfill is a Superfund Site).

THEREFORE BE IT RESOLVED THAT:

I. Regional Water Board Application of revised Federal Deadlines.

Except as provided in Section II of this resolution, it is the intent of the Board that any reference to the term "Federal Deadline" either in State Water Board Resolution No. 93-62 or in Waste Discharge Requirements (or in other Regional

Water Board orders) implementing that Resolution shall be interpreted in accordance with applicable compliance dates established in the revision of the federal MSW regulations promulgated on October 1, 1993 (58 FR 51536).

II. Chapter 15 deadlines.

It is the intent of the Board that this interpretation of State Water Board Resolution No. 93-62 shall not preclude any Regional Water Quality Control Board from requiring an owner or operator of an MSW landfill to achieve compliance either with earlier deadlines in Chapter 15 or with other earlier deadlines established by the Regional Water Board.

CERTIFICATION

The undersigned, Adminstrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 19, 1993.

Maureen Marchè
Adminstrative Assistant to the Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

ORDER NO. 93-83

GENERAL WASTE DISCHARGE REQUIREMENTS

AMENDING WASTE DISCHARGE REQUIREMENTS

FOR

MUNICIPAL SOLID WASTE LANDFILLS

AND

IMPLEMENTING PROVISIONS OF FEDERAL
MUNICIPAL SOLID WASTE LANDFILL REGULATIONS

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, authorized development of nationwide standards for disposal of municipal solid waste.

2. On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations, 40 CFR Parts 257 and Part 258, that apply to dischargers who own or operate landfills receiving municipal solid waste. The federal regulations require each state to implement the federal regulations or an equivalent program. States with approved programs may approve engineered alternatives to certain prescriptive standards contained in the federal regulations.

3. On June 17, 1993, the State Water Resources Control Board adopted Resolution No. 93-62, entitled Policy for Regulation of Discharges of Municipal Solid Waste (Policy), as State Policy for Water Quality Control under authority of Section 13140 of the California Water Code. The Policy directs each Regional Water Quality Control Board to revise the waste discharge requirements of each municipal solid waste landfill to comply with 40 CFR Parts 257 and Parts 258.

4. On June 29, 1993, the U.S. Environmental Protection Agency tentatively approved California's modified solid waste landfill regulations.

5. The Regional Water Board proposes to comply with State Water Resources Control Board Resolution No. 93-62 through the adoption of a single order amending the waste discharge requirements of municipal solid waste landfills within the North Coast Region.

6. Adoption of the general amendment is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), Division 13, commencing with Section 21000 of the Public Resources Code because it is an action by a regulatory agency for the protection of natural resources, within the meaning of Section 15307 of the Guidelines for Implementation of California Environmental Quality Act in Title 14 of the California Code of Regulations.

7. The Board has notified the dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations.

8. The Regional Water Board, in a public hearing, heard and considered all comments pertaining to adoption of this order.

9. The USEPA has announced its intention to set back several of the compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

THEREFORE, IT IS HEREBY ORDERED that Order No. 93-83 amends the waste discharge requirements of the dischargers listed in Section 1. Each discharger shall comply with the provisions of this Order in addition to provisions of existing waste discharge requirements, provided that provisions of this Order supercede any conflicting provision in the waste discharge requirements.

SECTION 1
General Applicability

(a) This Order is applicable to all existing and lateral expansions at municipal solid waste (MSW) landfills. All MSW landfills shall implement the provisions of Chapter 15, Division 3, Title 23, California Code of Regulations (CCR) and Federal regulations in 40 CFR Part 257 and 258.

(b) This Order applies only to MSW landfills that receive waste after October 9, 1991.

(c) MSW landfills receiving waste after October 9, 1991 that halt waste acceptance before October 9, 1993 are exempt from this Order with the exception of the final cover requirements presented in 40 CFR 258.60(a) provided that final cover, meeting the requirements of Article 8, Chapter 15 and 40 CFR 258.60(a), is installed within six months of the last receipt of waste.

(d) Landfills meeting the requirements of Sections 1(b) and 1(c) above are subject to all requirements of Chapter 15, Division 3, Title 23, CCR.

(e) Dischargers shall achieve compliance with the groundwater monitoring and corrective action portions of Chapter 15 and 40 CFR Part 258 in accordance with the schedule presented in Section 10 of this Order.

(f) The discharger shall submit financial assurance documents for closure, post closure and corrective action by April 9, 1994.

(g) This Order amends the waste discharge requirements for the following dischargers.

Landfill	Discharger	Order No.
Willits Solid Waste Disposal Site Class III Waste Management Unit	City of Willits and County of Mendocino	92-107
Laytonville Solid Waste Disposal Site	County of Mendocino	75-50
Caspar Solid Waste Disposal Site	County of Mendocino and City of Fort Bragg	78-125

Cummings Road Solid Waste Disposal Site	City Garbage Company of Eureka, Inc.	93-46
South Coast Solid Waste Disposal Site	County of Mendocino	77-23
Weaverville Solid Waste Disposal Site	County of Trinity	80-193
City of Ukiah Class II-2 Solid Waste Disposal Site	City of Ukiah	75-43
Happy Camp Landfill	County of Siskiyou	77-10
Lava Beds National Monument Solid Waste Disposal Site	U.S. Department of the Interior, National Park Service	79-76
Tennant Solid Waste Disposal Site	County of Siskiyou	80-46
Hotelling Gulch Solid Waste Disposal Site	County of Siskiyou	82-103
Rogers Creek Solid Waste Disposal Site	County of Siskiyou	82-121
Sheepy Ridge Solid Waste Disposal Site, Class III Waste Management Unit	City of Tulelake	89-74
City of Weed Solid Waste Disposal Site, Class III Waste Management Unit	City of Weed	89-70
City of Yreka Solid Waste Disposal Site, Class III Waste Management Unit	City of Yreka	89-68
Class II-2 Annapolis Solid Waste Disposal Site	County of Sonoma	78-64
Central Disposal Site, Class III Waste Management Unit	County of Sonoma	89-8
Crescent City Solid Waste Disposal Site, Class III Waste Management Unit	County of Del Norte	89-100 89-83

SECTION 2
INTERIM CLASSIFICATION

This section applies to all MSW landfills listed in Subsection 1 that, as of the effective date of this Order, have not been reclassified under 23 CCR §§2510(d,e), 2530(b), and 2591(c).

(a) MSW landfills subject to this section are hereby granted interim status as Class III landfills under Chapter 15, as of the effective date of this Order, unless and until the landfill is reclassified in accordance with that chapter.

(b) Dischargers owning or operating an MSW landfill subject to this section shall submit a revised report of waste discharge by October 9, 1994, that is in full compliance with Article 9 of Chapter 15 and that provides all information necessary for the Regional Water Board to reclassify the landfill pursuant to 23 CCR §§2510(d,e) and 2591(c).

SECTION 3
Definitions

(a)	Affected Persons	All individuals who either own or occupy land outside the boundaries of the parcel upon which the landfill is located that has been or may be affected by the release of leachate or waste constituents, in the liquid or gas phase, from a MSW landfill.
(b)	Composite Liner	A liner that consists of two or more components which include a synthetic liner in direct and uniform contact with an underlying layer of low permeability soil.
(c)	Constituents of Concern	Are those constituents which are likely to be in the waste in the MSW landfill including transformation and breakdown products.
(d)	Existing Footprint	The areal projection portion of land covered by waste as of midnight on the day before the Federal Deadline. The term includes only areas covered by waste that was discharged in a manner consistent either with past good management practices or permitted operations.
(e)	Federal Deadline	The date listed in 4 CFR Part 258 when the majority of the federal MSW regulations become effective. The current date is October 9, 1993 unless otherwise modified.
(f)	Lateral Expansion	Any horizontal expansion beyond the existing footprint, as defined in subsection (d) above.

(g) MSW Landfill — For the purpose of this Order, means a Class II or Class III landfill that has accepted or accepts municipal solid waste or solid waste by-products such as ash.

(h) Unstable area — A location that is susceptible to natural or human-induced events capable of impairing the integrity of some or all of the landfill's structural components.

SECTION 4
Liner Requirements

(a) Define Existing Footprint

All dischargers operating after the Federal Deadline, shall document the existing footprint of the waste as of the Federal Deadline using photographs and topographic maps. Documentation shall be submitted to the Regional Water Board by January 15, 1994.

(b) Discharge Prohibition

As of the Federal Deadline, except as noted in subsection 3(c) below, discharge of municipal solid waste to areas that have not received waste is prohibited unless the disposal area is equipped with a composite liner meeting the following requirements:

i. The uppermost liner component is a synthetic liner at least 40 mils thick (60 mils for high density polyethylene) installed in direct contact with the underlying materials; and

ii. Has a lower liner component consisting of compacted soil at least two feet thick having a hydraulic conductivity no more than 1×10^{-7} cm/sec.

Alternative designs may be approved by the Executive Officer provided the design satisfies the criteria for an engineered alternative as defined by Chapter 15, Section 2510(b). The engineered alternative shall equal or exceed the performance of the above described composite liner system.

(c) Exemption from Prescriptive Standards

1. Liners Constructed prior to the Federal Deadline

Disposal areas constructed prior to the Federal Deadline which have not received waste as of the Federal Deadline must be retrofitted as follows:

i. A liner system consisting of a composite liner having its uppermost liner at least 40 mil thick (or 60 mil for high density polyethylene) installed in direct and uniform contact with the underlying materials.

2. Steep Sideslopes

Liner systems installed on those portions of a MSW landfill where sideslopes are too steep to permit construction of a stable composite liner meeting the criteria in Subsection 3(b) above shall include an alternative liner design that meets the performance criteria of 40 CFR 258.40(c) and is either:

i. A composite liner consisting of a 40 mil thick synthetic upper layer (60 mil thick for high density polyethylene); or

ii. Is not a composite liner, but includes a synthetic liner at least 60 mils thick (80 mils for high density polyethylene).

(d) Leachate Collection and Removal System

All liner systems shall include a leachate collection and removal system which conveys leachate to a collection point(s). Leachate conveyance on unlined or clay-lined areas is prohibited.

SECTION 5
Liquids Acceptance

(a) General Prohibition

On the Federal Deadline, the discharge of leachate or landfill gas condensate to a MSW landfill is prohibited unless:

1. The portion of the landfill to which leachate is being discharged is equipped with a composite liner meeting the requirements of Section 4(b) of this Order; and

2. The leachate or gas condensate is being returned to the landfill that produced it.

SECTION 6
Siting Criteria

(a) 100-year floodplains

All existing MSW landfills and lateral expansions located in 100-year floodplains must demonstrate that the waste management unit will not restrict the flow of the 100 year flood, reduce the temporary water storage capacity of the floodplain or result in inundation or washout of solid waste. A report documenting compliance with this provision is due by January 15, 1994.

Existing MSW landfills that cannot make this demonstration must close by October 9, 1996. The closure deadline may be extended by 2 years if the discharger

demonstrates to the Regional Water Board that there is no available alternative disposal capacity and no immediate threat to human health and the environment.

(b) Wetlands

Discharge of municipal solid waste to a wetland, as defined in 40 CFR 232.2(r), is prohibited unless the discharger completes all demonstrations required under 40 CFR 258.12(a).

(c) Fault Areas

Lateral expansions shall not be located within 200 feet of a Holocene fault. The Regional Water Board may prescribe an alternative setback less than 200 feet if the discharger demonstrates the integrity of all containment structures and that the alternative will be protective of human health and the environment.

(d) Unstable Areas

Existing MSW landfills and lateral expansions located in unstable areas must demonstrate the integrity of all containment structures. The discharger must consider factors presented in 40 CFR 258.15. A report documenting compliance with this provision is due by January 15, 1994.

If the discharger cannot demonstrate the integrity of the MSW landfill, affected portions of the landfill must close by October 9, 1996. The deadline may be extended up to two years by the Regional Water Board if the discharger demonstrates that there is no available alternative disposal capacity and there is no immediate threat to human health and the environment.

SECTION 7
Closure/Post Closure Plan

(a) Submittal of Closure Plans

1. Recently Closed MSW landfills

Dischargers who operate a MSW landfill that received waste after October 9, 1991 but will cease waste disposal by the Federal Deadline shall submit a report to the Regional Water Board by January 15, 1994 documenting that the landfill's final cover meets the requirements of 40 CFR 258.60(a) or submit modifications to its closure plan to comply with 40 CFR 258.60(a).

2. Operating MSW landfills

Dischargers who operate a MSW landfill that received waste on or after October 9, 1991 and that will not initiate final closure by the Federal Deadline, shall submit a closure and post closure maintenance plan to the Regional Water Board by the Federal Deadline that complies with 40 CFR 258.60 and 258.61 and Article 8, Chapter 15, Title 23, CCR.

3. Post Closure Maintenance

Post Closure maintenance must be conducted for minimum of 30 years.

SECTION 8
Deed Notation

(a) Deed notation

Following closure, the discharger shall provide proof to the Regional Board that the property deed or some other instrument that is normally examined during a title search has been modified, in perpetuity, to notify any potential purchaser of the property that:

i. The property has been used as a MSW landfill.

ii. Land use options for the property are restricted in accordance with the approved post closure plan and Waste Discharge Requirements for the landfill.

SECTION 9
Financial Assurance

(a) Financial assurance documents for closure, post closure and corrective action shall be prepared in accordance with the provisions of 40 CFR Part 258, Subpart G; Title 14, CCR administered by the Integrated Waste Management Board; and Article 5, Chapter 15, Division 3, Title 23, CCR.

Section 10
Implementation Schedule
Self Monitoring Program

(a) General Applicability

Unless the discharger proposes and the Executive Officer approves an alternative monitoring program that meets the requirements of Article 5, Chapter 15 and 40 CFR 258, Subpart E, the discharger shall determine compliance with this Order using the self monitoring program presented in this Order. The discharger shall implement the monitoring program as follows:

(1) By January 15, 1994 the discharger shall submit a report to the Regional Water Board that determines the distance between the waste management unit and any potential drinking water sources.

(2) Landfills within one mile of a potential drinking water source shall submit a monitoring systems report by August 9, 1994 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1994.

(3) Landfills farther than one mile from a potential drinking water source shall submit a monitoring systems report by August 9, 1995 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1995.

(b) The Monitoring Parameters and Constituent of Concern(COC) list shall be determined in accordance with Section 11 and 12 of this Order, respectively. For all new COC's, the discharger will immediately develop background concentrations and Concentration Limits in accordance with Section 13 and 14 of this Order.

(c) The Monitoring Systems Report shall:

(1) Identify all distinct bodies of groundwater that could be affected in the event of a release from the landfill. This list shall include at least the uppermost aquifer underlying the landfill and any permanent or ephemeral zones of perched water underlying the landfill;

(2) Demonstrate that the landfill's existing and proposed monitoring systems satisfy the following requirements;

(A) The groundwater monitoring system for each distinct groundwater body identified above must meet the requirements of 40 FR §§258.51(a,c, and d) and 23 CCR §2550.7(b); and

(B) Only for dischargers whose waste discharge requirements, as of the effective date of this Order, have not been revised to incorporate the July 1, 1991 revisions to Article 5, Chapter 15:

i. An MSW landfill in close proximity to any surface water body must meet the requirements of 23 CCR §2550.7(c); and

ii. An MSW landfill overlying an unsaturated zone that can be feasibly monitored must meet the requirements of 23 CCR §2550.7(d).

(3) Include a map showing the Monitoring Points, Background Monitoring Points and the Point of Compliance under 23 CCR §2550.5;

(4) Estimate the Compliance Period under 23 CCR §2550.6; and

(5) Include a list of all Constituents of Concern and Concentration Limits determined in accordance with Sections 12, 13 and 14 of this Order.

SECTION 11
Monitoring Parameters
Self Monitoring Program

(a) In accordance with the implementation schedule presented in Section 10(a), the discharger shall analyze water samples from each water-bearing medium for the following Monitoring Parameters unless the Regional Water Board approves alternative Monitoring Parameters that meet the requirements of both 23 CCR §§2550.0 et seq. and 40 CFR §§258.54. The discharger shall test the resulting data using either the statistical and non-statistical methods listed in Section 14(f) of this Order or alternative methods the Regional Water Board finds meets the requirements of 23 CCR §§2550.7(e)(6-10) and 40 CFR §258.53:

Volatile Organic Compounds (EPA method 601 and 602)
Metals (EPA 6010: arsenic, selenium and mercury by AA)
Mineral (Calcium, Magnesium, Sodium, Chloride and Sulfate)
General (Alkalinity, pH, Fluoride, Nitrate, Total Dissolved Solids and Chemical Oxygen Demand)

(b) For each medium, the Monitoring Points shall be monitored semiannually, once each Winter/Spring and Summer/Fall.

SECTION 12
Constituents of Concern
Self Monitoring Program

(a) Landfills lacking a functioning Leachate Collection System

(1) For any MSW landfill that does not have both a liner and a leachate collection and removal system (LCRS) that produces leachate, the list of Constituents of Concern (COC) is hereby revised to include all constituents listed in the waste discharge requirements as of the effective date of this Order, in addition to all constituents listed in Appendix II to 40 CFR Part 258. The discharger shall monitor all COCs every five years at a minimum; and

(2) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year, beginning with the date of this Order. Once this reference set of background data is collected, the discharger shall include it in the Monitoring Systems Report or in the next self-monitoring report.

(b) Landfills having a Leachate Collection System

(1) For any MSW landfill equipped both with a liner and with a leachate collection and removal system (LCRS) that produces leachate, the Constituent of Concern list is revised to include all waste constituents listed in the waste discharge requirements as of the effective date of this Order, and each constituent listed in Appendix II to 40 CFR Part 258 that is present in leachate samples obtained from the LCRS.

(2) A compound is defined to be present in leachate if the compound is detected in two consecutive samples from the LCRS. Samples shall be taken in October and April. The April sample is needed only when the October sample identifies new compounds not already included on the COC list.

(3) Sample results shall be submitted to the Regional Board in July of each year. The report shall identify all Appendix II constituents detected that are not on the landfill's Constituent of Concern list and all constituents which must be added to the landfill's COC list.

(4) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year following the date the constituent is submitted to the Regional Water Board as a new COC. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal.

SECTION 13
Concentration Limits
Self Monitoring Program

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter shall be established as follows, and shall be used as the basis of comparison with data from the Monitoring Points:

(a) Concentration Limits shall be set at the background value of the constituent based on historical data; or

(b) The constituent's Concentration Limit may be established during each Monitoring Period using data from all samples collected during that Monitoring Period in the event the discharger establishes the occurrence of seasonal or temporal variations in water quality; or

(c) The discharger may propose, for Regional Water Board approval, a Concentration Limit greater than background for use during, or after, corrective action.

SECTION 14
Detection Monitoring
Self Monitoring Program

The following detection monitoring program applies to each MSW landfill unless, and until, the Regional Water Board revises the waste discharge requirements for the landfill to include an alternative detection monitoring program that complies with both the federal MSW regulations and with the most recent revisions to Article 5 of Chapter 15.

(a) Sampling and Analytical Methods

Sample collection, storage, and analysis shall be performed according to the most recent version of Test Methods for Evaluating Solid Waste (USEPA publication "SW-846"), and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard USEPA Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Water Board Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board. In addition, the discharger is responsible for seeing that the laboratory analysis of all samples meets the following restrictions:

(1) The methods of analysis and the detection limits used shall be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from Background Monitoring Points, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects involved;

(2) Analytical results falling between the MDL and the practical quantitation limit (PQL) shall be reported as "trace", and shall be accompanied both by the (nominal or estimated) MDL and PQL values for that analytical run;

(3) MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California's laboratory accreditation procedures. These nominal MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived nominal MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved;

(4) All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation for any recovery rate that is less than 80%, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged;

(5) Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for reference;

(6) Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte. The MDL and PQL shall be determined or estimated for each peak.

(b) Required Monitoring Reports

(1) All Monitoring Points assigned to detection monitoring shall be monitored once each Winter/Spring and Summer/Fall (Winter/Spring and Summer/Fall Reporting Periods end on March 31 and September 30, respectively).

(2) Annual Report

The discharger shall submit an annual report to the Regional Water Board in January covering the previous monitoring year. This report may be combined with the semiannual monitoring report. The report shall contain the following at a minimum:

(A) For each Monitoring Point, laboratory data will be submitted in graphical format for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct

the discharger to carry out a preliminary investigation [23 CCR §2510(d)(2)], the results of which will determine whether or not a release is indicated;

(B) All monitoring data obtained during the previous two six-month Reporting Periods shall be presented in tabular form as well as on diskettes either in MS-DOS/ASCII format or in another file format acceptable to the Regional Water Board's Executive Officer;

(C) A comprehensive discussion of the compliance record, and any corrective actions taken or planned which may be needed to bring the discharger into full compliance with the landfill's waste discharge requirements;

(D) A map showing the area, if any, in which filling has been completed during the previous calendar year;

(E) A written summary of monitoring results and monitoring system(s), indicating any changes made or observed since the previous annual report;

(F) For MSW Landfills having leachate monitoring/control facilities, an evaluation of their effectiveness, pursuant to 23 CCR §§2543(b,c, & d).

(3) Routine Constituent of Concern Monitoring

In the absence of a release being indicated, the discharger shall monitor all Constituents of Concern and submit a report as follows:

(A) The discharger shall sample all Monitoring Points for all COCs every fifth year, beginning with the Spring of 1996. Subsequent COC monitoring efforts being carried out every fifth year thereafter, alternating between the Fall and Spring monitoring periods. The COC Report may be combined with any Monitoring Report;

(B) The discharger shall monitor for all Constituents of Concern provided that such monitoring need only encompass those Constituents of Concern that do not also serve as Monitoring Parameters.

(4) Minimum Content of Monitoring Reports

All reports shall be submitted by January 15 and July 15. The reports shall be comprised of at least the following, in addition to the specific contents listed above.

(A) A letter summarizing the essential points in the report. This letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned to correct those violations. If the discharger has previously submitted a detailed time schedule for correcting said violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. Each monitoring report and the transmittal letter shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the

discharge originates. The transmittal letter shall contain a statement by this official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

(B) For Detection Monitoring and COC Reports only:

1. For each monitored groundwater body, a description and graphical presentation of the velocity and direction of groundwater flow under/around the landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report; and

2. For each monitoring well, a description of the method and time of water level measurement and a description of the method of purging used both before sampling and after sampling to remove the water that was in the well bore while the sample was being taken; and

3. For each Monitoring Point sampled; a description of the type of pump or other device used and its vertical placement for sampling; a detailed description of the sampling procedure i.e., number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used; the date and time of sampling; the name and qualifications of the person actually taking the samples, and any other observations;

(C) A map (or copy of an aerial photograph) showing the locations of observation stations, Monitoring Points, and Background Monitoring Points;

(D) For Detection Monitoring and COC Reports only, the laboratory results of all analyses;

(E) A statement as to the condition and performance of any leachate monitoring and control facilities, and of the runoff/run-on control facilities;

(F) The quantity and types of wastes discharged and the locations in the landfill where waste has been placed since submittal of the last such report.

(c) Contingency Responses

(1) Leachate Seeps

The discharger shall immediately report by telephone concerning the discovery any previously unreported seepage from the disposal area. A written report shall be filed with the Board within seven days, containing at least the following information:

(A) A map showing the location(s) of seepage;

(B) An estimate of the flow rate;

(C) A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

(D) Corrective measures approved (or proposed for consideration) by the Regional Water Board Executive Officer.

(2) Response to Initial Indication of Release

Should the initial statistical or non-statistical comparison indicate, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified, the discharger shall: immediately notify the Regional Water Board staff verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved; shall provide written notification by certified mail within seven days of such determination [23 CCR §2550.8(j)(1)]; and shall carry out a discrete retest with 30 days in accordance with subsection (f)(3) of this section. If the retest confirms the existence of a release, the discharger shall carry out the requirements of subsection (c)(4) of this section. In any case, the discharger shall inform the Regional Water Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven days of completing the retest.

(3) Physical Evidence of a Release

If either the discharger or the Regional Water Board Executive Officer determines that there is significant physical evidence of a release [23 CCR §2550.1(3)], the discharger shall:

(A) Immediately notify the Regional Water Board by certified mail (or acknowledge the Regional Water Board's determination);

(B) Carry out the requirements of subsection (c)(4) of this section for all potentially-affected monitored media; and

(C) Carry out any additional investigations stipulated in writing by the Regional Water Board Executive Officer for the purpose of identifying the cause of the indication.

(4) Response to a Confirmed Release

If the discharger concludes that a release has been discovered:

(A) If this conclusion is not based upon monitoring for all Constituents of Concern, then the discharger shall, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis within thirty days of discovering the release. Within seven days of receiving the laboratory analytical results, the discharger shall notify the Regional Water Board, by certified mail, of the concentration of all Constituents of Concern at each Monitoring Point; this notification shall include a synopsis showing those constituents that exhibit an unusually high concentration. Because the data from this scan is not to be statistically tested against background, only a single datum is required for each Constituent of Concern at each Monitoring Point [23 CCR §2550.8(k)(1)];

(B) The discharger shall, within 90 days of confirming a release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program that:

1. Is intended to define the nature and extent of the release and meets the requirements of 23 CCR §2550.8(k)(5) and §2550.9; and

2. Satisfies the requirements of 40 CFR §258.55(g)(1)(ii) by committing to install at least one monitoring well at the facility boundary directly downgradient of the center of the release, immediately after delineating the nature and extent of the release under 23 CCR §2550.9(b);

(C) 90 days after the Regional Board directs the discharger to implement the Evaluation Monitoring Program, the discharger will submit a report delineating the vertical and horizontal limits of the release for all Constituents of Concern. This delineation effort shall be carried out in addition to any ongoing monitoring program (e.g., detection monitoring program); nevertheless, the discharger's delineation effort shall encompass all relevant monitoring data.

(D) The discharger shall, within 180 days of confirming a release, submit a preliminary engineering feasibility study meeting the requirements of 23 CCR §2550.8(k)(6).

(5) Release beyond the Facility Boundary

Any time a release beyond the facility boundary occurs, the discharger shall notify all persons who either own or reside upon the land that directly overlie any part of the plume.

(A) Initial notification to affected persons shall be accomplished within 14 days of making this conclusion and shall include a description of the discharger's current knowledge of the nature and extent of the release.

(B) Subsequent to initial notification, the discharger shall provide updates to all affected persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

(C) Each time the discharger sends a notification to affected persons, the discharger shall provide the Regional Water Board, within seven days of sending such notification, with both a copy of the notification and a current mailing list of affected persons.

(6) Response to VOC Detection in Background

Except for VOC's previously validated as not originating from the landfill, any time the laboratory analysis of a sample from a Background Monitoring Point, shows either (a) two or more VOCs at or above their respective MDL; or (b) one VOC at or above its respective PQL, then the discharger shall immediately notify the Regional Water Board by phone that possible background contamination has occurred, shall follow up with written notification by certified mail within seven days, and shall obtain two ne independent VOC samples from that Background Monitoring Point and send th

for laboratory analysis of all detectable VOCs within thirty days. If either or both of these retest samples validates the presence of VOC(s) at that Background Monitoring Point, the discharger shall:

1. Immediately notify the Regional Water Board that VOC(s) are present at Background Monitoring Point(s), and follow-up with written notification submitted by certified mail within seven days of validation; and

2. Within 180 days of validation, submit a report, acceptable to the Executive Officer, which examines the possibility that the detected VOC(s) originated from the landfill (e.g., using concentration gradient analyses), and proposes appropriate changes to the monitoring program.

(B) If, after reviewing the report, the Executive Officer determines that the VOC(s) originated from a source other than the landfill, the Executive Officer will make appropriate changes to the monitoring program.

(C) If, after reviewing the report, the Executive Officer determines that the VOC(s) most likely originated from the landfill, the discharger shall conclude that a release has been detected and shall immediately investigate the release in accordance with subsection (c)(4) this section.

(d) Water Sampling and Analysis for Detection Monitoring

(1) For any given monitored medium, samples shall be taken from all Monitoring Points during the latter third of the Reporting Period within a span not exceeding 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [23 CCR §2550.7(e)(12)(B)]. Sample procurement shall be carried out as late in the Reporting Period as feasible, considering the time needed to analyze the samples, analyze the resulting data, and submit the monitoring report.

(2) Groundwater sampling shall also include an accurate measurement of the groundwater surface elevation and field parameters (temperature, electrical conductivity, turbidity) [23 CCR §2550.7(e)(13)]. Groundwater elevations shall be taken prior to purging the well.

(3) Statistical or non-statistical analysis shall be carried out as soon as the monitoring data is available.

(e) For each monitored groundwater body, the discharger shall determine the groundwater flow rate and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. This information shall be included in the semiannual monitoring reports.

(f) Statistical and Non Statistical Methods

The following data analysis methods shall be used at MSW landfills unless and until the discharger proposes, and the Regional Water Board revises the waste discharge requirements to include, data analysis methods that comply with the July 1, 1991 revision of Article 5 of Chapter 15. Nevertheless, dischargers who own or operate MSW landfills having waste discharge requirements that have been revised to comply with revised Article 5 shall use the following non-statistical data analysis methods for constituents that cannot be addressed by statistical means and shall use the

following statistical analysis scheme on those constituents for which the Regional Water Board has not yet approved a statistical method.

The discharger subject to this section shall use the most appropriate of the following methods to compare the downgradient concentration of each monitored constituent (or parameter) with its respective background concentration to determine if there has been a release from the landfill. For any given data set, the discharger shall first decide if statistical analysis is possible, by reference to the relative frequency with which the constituent is detected in background samples. For a constituent that qualifies for statistical analysis, the discharger shall proceed sequentially down the list of statistical analysis methods listed below, using the first method for which the data qualifies. Those constituents for which no statistical method is appropriate shall be analyzed by the non-statistical method. If the initial statistical/non-statistical analysis tentatively indicates the detection of a release, the discharger shall implement the retest procedure under subsection (f)(3) of this section.

(1) Statistical Methods.

The discharger shall use one of the following statistical methods to analyze Constituents of Concern or Monitoring Parameters which exhibit concentrations which equal or exceed their respective MDL in at least ten percent of the background samples taken during that Reporting Period. Except for pH, which uses a two-tailed approach, the statistical analysis for all constituents and parameters shall be one-tailed (testing only for statistically significant increase relative to background):

(A) One-Way Parametric Analysis of Variance (ANOVA), followed by multiple comparisons [§2550.7(e)(8)(A)]. This method requires at least four independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data for the parameter or constituent, obtained during a given sampling period, has not more than 15% of the data below the PQL. Prior to analysis, replace all "trace" determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section;

(B) One-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine independent samples from each Monitoring Point and Background Monitoring Point; therefore, the discharger shall anticipate the need for taking more than four samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given Sampling Period, has not more than 50% of the data below the PQL. The ANOVA shall be carried out at the 95% confidence

level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section; or

(C) Method of Proportions. This method shall be used if the "combined data set" -- the data from a given Monitoring Point in combination with the data from the Background Monitoring Points -- has between 50% and 90% of the data below the MDL for the constituent or parameter in question. This method: (a) requires at least nine downgradient data points per Monitoring Point per Reporting Period; (b) requires at least thirty data points in the combined data set; and, (c) requires that $n * P > 5$ (where n is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL). Therefore, the discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99% confidence level. If the analysis results in rejection of the Null Hypothesis (i.e., that there is no release), the discharger shall conclude that a release is tentatively indicated for that constituent or parameter, and shall immediately implement the retest procedure under subsection (f)(3) of this section.

(2) Non-Statistical Method. The discharger shall use the following non-statistical method for analyzing all constituents which are not amenable to statistical analysis by virtue of having being detected in less than 10% of applicable background samples. A separate variant of this test is used for the VOC_{water} Composite Monitoring Parameter and for qualifying Constituents of Concern. Regardless of the test variant used, the method involves a two-step process: (a) from all constituents to which the test variant applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample from a given Monitoring Point, then (b) evaluate whether the listed constituents meet either of the test variant's two possible triggering conditions. For each Monitoring Point, the list described above shall be compiled based on either: the data from the single sample (for that constituent) taken during that Reporting Period from that Monitoring Point, or (where several independent samples have been analyzed for that constituent at a given Monitoring Point) the data from the sample which contains the largest number of detected constituents. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period (at least one sample from each Background Monitoring Point). The method shall be implemented as follows:

(A) Version for the Volatile Organics Composite Monitoring Parameter For Water Samples (VOC_{water})

For any given Monitoring Point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all detectable VOCs, including at least all 47 VOCs listed in Appendix I to 40 CFR Part 258. The discharger shall compile a list of each VOC which exceeds its MDL in the Monitoring Point sample (an unidentified peak must exceed its presumed MDL to be a candidate for the list), and also exceeds its MDL in

less than ten percent of the samples taken during that Reporting Period from that medium's Background Monitoring Points. The discharger shall conclude that a release is tentatively indicated for the VOC_{water} composite Monitoring Parameter if the list either; (a) contains two or more VOCs that equals or exceeds its MDL; or (b) contains one VOC that equals or exceeds its PQL;

(B) Version for Constituents of Concern.

During Constituent of Concern monitoring, the discharger shall compile a list of constituents of concern at each Monitoring Point that equals or exceeds their respective MDL at the Monitoring Point yet do so in less than ten percent of the background samples taken during that Reporting Period. The discharger shall conclude that a release is tentatively indicated if the list either; (a) contains two or more constituents that equals or exceeds its MDL; or (b) contains one constituent which equals or exceeds its PQL.

(3) Discrete Retest Procedure

In the event that the discharger concludes that a release has been tentatively indicated, the discharger shall collect two new suites of samples (for VOC_{water} or for the indicated Constituent[s] of Concern) from the Monitoring Point in question within 30 days of such indication. Resampling of the Background Monitoring Points is optional. As soon as the retest data is available, the discharger shall use the same statistical method as the initial test to separately analyze each of the two suites of retest data for the affected Monitoring Point. For any indicated Monitoring Parameter or Constituent of Concern, if the test results of either (or both) of the retest data suites confirms the original indication, the discharger shall conclude that a release has been discovered and shall carry out the requirements of subsection (c)(4) of this section. All retests shall be carried out only for those Monitoring Point(s) at which a release is tentatively indicated, and only for the Constituent of Concern or Monitoring Parameter which triggered the indication there, as follows:

(A) If a (parametric or non-parametric) ANOVA method was used in the initial test, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two new suites of samples taken from the indicating Monitoring Point;

(B) If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, carried out separately on each of the two new suites of samples from the indicating Monitoring Point;

(C) If the non-statistical method was used:

1. Because the VOC_{water} composite Monitoring Parameter is a single parameter which addresses an entire family of constituents likely to be present in any landfill release, the scope of the laboratory analysis for each of the two retest samples shall

include all VOCs detectable in that retest sample. Therefore, a confirming retest for either parameter shall have validated the original indication even if the detected constituents in the confirming retest sample(s) differs from those detected in the sample which initiated the retest;

2. Because all Constituents of Concern that are jointly addressed in the non-statistical test under subsection (f)(2)(B) above, remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest of Constituents of Concern shall address only those constituents detected in the sample which initiated the retest.

I, Benjamin D. Kor, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on September 22, 1993.

ORIGINAL SIGNED BY

Benjamin D. Kor
Executive Officer

(order - Final Version)

ENCLOSURE

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 93-62

POLICY FOR REGULATION OF DISCHARGES OF MUNICIPAL SOLID WASTE

WHEREAS:

1. **Water quality protection**–The State Water Resources Control Board (**State Water Board**) and each Regional Water Quality Control Board (**Regional Water Board**) are the state agencies with primary responsibility for the coordination and control of water quality (California Water Code Section 13001, "**WC §13001**");

2. **State Policy for Water Quality Control**–The State Water Board is authorized to adopt State Policy For Water Quality Control which may consist of or contain "...principles and guidelines deemed essential by the state board for water quality control" (Authority: WC §§1058, 13140, 13142);

3. **State agency compliance**–All State agencies shall comply with State Policy For Water Quality Control regarding any activities that could affect water quality (WC §13146);

4. **Waste Discharge Requirements**–Regional Water Boards regulate discharges of waste that could affect the quality of waters of the state, including discharges of solid waste to land, through the issuance of waste discharge requirements (WC §13263);

5. **Solid waste disposal**–The State Water Board is directed to classify wastes according to threat to water quality and to classify waste disposal sites according to ability to protect water quality (WC §13172);

6. **Chapter 15**–The State Water Board promulgated regulations, codified in Chapter 15 of Division 3 of Title 23 of the California Code of Regulations (23 CCR §§2510-2601, "**Chapter 15**"), governing discharges of waste to land. These regulations:

   a. Contain classification criteria for wastes and for disposal sites;

   b. Prescribe minimum standards for the siting, design, construction, monitoring, and closure of waste management units;

7. **Federal authority**–The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 USC §6901, *et seq*, "**SWDA**"), authorizes development of nationwide standards for disposal sites for municipal solid waste [**MSW**], including criteria for sanitary landfills (SWDA §§1007, 4004, 42 USC §§6907, 6944);

8. **Federal MSW regulations**–On October 9, 1991, the United States Environmental Protection Agency (**USEPA**) promulgated regulations that apply, in California, to dischargers who own or operate landfills which accept municipal solid waste on or after October 9, 1991, (**MSW landfills**), regardless of whether or not a permit is issued (Title 40, Code of Federal Regulations [**CFR**], Parts 257 and 258, "**federal MSW regulations**"). The majority of the federal MSW regulations become effective on what is hereinafter referred to as the "**Federal Deadline**" [40 CFR §258.1(e)], currently October 9, 1993;

9. **States required to apply federal MSW regulations**–Each state must "...adopt and implement a permit program or other system of prior approval and conditions to assure that each...[MSW landfill]...within such state...will comply with the...[federal MSW landfill regulations]." State regulations promulgated to satisfy this requirement are subject to approval by USEPA. (SWDA §§4003, 4005, 42 USC §§6943, 6945);

10. **Approved state's authority**–The permitting authority in an "approved state" may approve engineered alternatives to certain prescriptive standards contained in the federal MSW regulations, provided that the alternative meets specified conditions and performance standards (40 CFR 256.21);

11. **State application**–The State Water Board and the Integrated Waste Management Board submitted an application for program approval to the USEPA on February 1, 1993;

12. **Chapter 15 deficiencies**–The State Water Board's Chapter 15 regulations are comparable to the federal MSW regulations. Nevertheless, the USEPA has identified several areas of Chapter 15 which are not adequate to ensure compliance with certain provisions of the federal MSW regulations, as summarized in **Attachment I**;

13. **Rulemaking to amend Chapter 15**–There is insufficient time, prior to October 9, 1993, for the State Water Board to amend Chapter 15 to ensure complete consistency with the federal MSW regulations and subsequently for the USEPA to carry out a review of the revised chapter and to render a decision approving California's permit program;

14. **Composite liner(s) needed**–Solid Waste Assessment Test Reports, submitted to Regional Water Boards pursuant to WC §13273, have shown that releases of leachate and gas from MSW landfills that are unlined are likely to degrade the quality of underlying ground water. Research on liner systems for landfills indicates that **(a)** single clay liners will only delay, rather than preclude, the onset of leachate leakage, and **(b)** the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas;

15. **Lack of compliance with Chapter 15**–WDRs for many MSW landfills have not been revised to meet the most recent Chapter 15 amendments;

16. **CEQA**–Adoption of this policy is categorically exempt from the provisions of the California Environmental Quality Act (Division 13, commencing with §21000, of the Public Resources Code, "**CEQA**") because it is an action by a regulatory agency for the protection of natural resources, within the meaning of §15307 of the *Guidelines For Implementation of California Environmental Quality Act* in Title 14 of the California Code of Regulations;

17. **Public notice**–Notice of the State Water Board's proposal to adopt a State Policy for Water Quality Control regarding Regulation of Discharges of Municipal Solid Waste was published on March 31, 1993, and a public hearing on the matter was held on June 1, 1993; and

18. **Reference**—This Policy implements, interprets, or makes specific the following Water Code Sections: §13142, §13160, §13163, and §13172.

THEREFORE BE IT RESOLVED:

I. Implementation of the Chapter 15 and federal MSW regulations:

A. **WDR revision**—In order to insure compliance with SWDA §§4003, 4005 (42 USC §§6943, 6945), each Regional Water Board shall henceforth implement in waste discharge requirements for discharges at MSW landfills, both the Chapter 15 regulations and those applicable provisions of the federal MSW regulations that are necessary to protect water quality, particularly the containment provisions stipulated in Section III of this Policy and the provisions identified in Attachment I to this Policy, and shall revise existing waste discharge requirements to accomplish this according to the schedule provided in Section I[illegible] this Policy;

B. **Alternatives limited**—The Regional Water Board shall not rely upon any exemption or alternative allowed by Chapter 15 if such an exemption or alternative would not be allowed under the federal MSW regulations, nor shall the Regional Water Board waive waste discharge requirements for the discharge of municipal solid waste at landfills;

C. **Applicability in the absence of useable waters**—Although all other provisions of this Policy would continue to apply, the Regional Water Board shall have the discretion to prescribe requirements for containment systems and water quality monitoring systems that are less stringent than the design and construction standards in this Policy, in the federal MSW regulations, and in Chapter 15 if the Regional Water Board finds that the containment systems satisfy the performance standard for liners in the federal MSW regulations [40 CFR §§258.40(a)(1) and (c)], that the prerequisite for an exemption from ground water monitoring in the federal MSW regulations is satisfied [40 CFR §258.50(b)], and that either of the following two conditions is satisfied:

1. A hydrogeologic investigation shows that:

   a. There is no aquifer (i.e., a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of ground water to wells or springs) underlying the facility property; and

   b. It is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body in the ground water basin within which the landfill is located; or

2. The ground water in the basin underlying the facility has no beneficial uses and a hydrogeologic investigation shows that it is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body having beneficial uses.

II. Implementation schedule:

A. **MSW landfills**–By the Federal Deadline (e.g., October 9, 1993), each Regional Water Board shall amend the waste discharge requirements for discharges of waste at all MSW landfills in its region (including discharges to any area outside the actual waste boundaries of an MSW landfill as [illegible] exist on that date ["**lateral expansion**"

hereinafter]), to require persons who own or

1. Except for the ground water monitoring and corrective action requirements under 40 CFR §§258.50-258.58, comply with all applicable portions of the federal MSW regulations by the Federal Deadline; and

2. Achieve full compliance with Chapter 15 and with the federal ground water monitoring and corrective action requirements under 40 CFR §§258.50-258.58 as follows:

   a. For all MSW landfills that are less than one mile from a drinking water intake (surface or subsurface), by no later than October 9, 1994; and

   b. For all other MSW landfills that have accepted waste prior to the effective date of this Policy, by no later than October 9, 1995;

B. **Proposed MSW landfills**–As of the date of the Federal Deadline, waste discharge requirements for the discharge of waste at all MSW landfills that have not accepted waste as of that date shall ensure full compliance both with Chapter 15 and with the federal MSW regulations prior to the discharge of waste to that landfill.

III. Containment–As of the Federal Deadline, discharges of waste to either an MSW landfill that has not received waste as of that date or to a lateral expansion of an MSW landfill unit are prohibited unless the discharge is to an area equipped with a containment system which is constructed in accordance with the standard of the industry and which meets the following additional requirements for both liners and leachate collection systems:

A. **Standards for liners**

1. **Post-Federal Deadline construction**–Except as provided in either §III.A.3. (for steep sideslopes) or §III.A.2. (for new discharges to pre-existing liners), after the Federal Deadline, all containment systems shall include a composite liner that consists of an upper synthetic flexible membrane component (**Synthetic Liner**) and a lower component of soil, and that either:

   a. **Prescriptive Design**:

      i. **Upper component**–Has a Synthetic Liner at least 40-mils thick (or at least 60-mils thick if of high density polyethylene) that is installed in direct and uniform contact with the underlying compacted soil component described in paragraph III.A.1.a.ii.; and

      ii. **Lower component**–Has a layer of compacted soil that is at least two feet thick and that has an hydraulic conductivity of no more than 1×10^{-7} cm/sec (0.1 feet/year); or

   b. **Alternative design**–Satisfies the performance criteria contained in 40 CFR §§258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the above Prescriptive Design [as provided by 23 CCR §2510(b)], where the performance of the alternative composite liner's components, in combination, equal or exceed the waste containment capability of the Prescriptive Design;

2. **New discharges to liners constructed prior to the Federal Deadline**–Except as provided in §III.A.3. (for steep sideslopes), containment systems that will begin to accept municipal solid waste after the Federal Deadline, but which have been constructed prior to the Federal Deadline, are not required to meet the provisions of §III.A.1. if the containment system includes a composite liner that:

   a. **Prescriptive Design**–Features as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; and

   b. **Performance**–Meets the performance criteria contained in 40 CFR §§258.40(a)(1) and (c);

3. **Steep sideslopes**–Containment systems installed in those portions of an MSW landfill where an engineering analysis shows, and the Regional Water Board finds, that sideslopes are too steep to permit construction of a stable composite liner that meets the prescriptive standards contained in §§III.A.1 or 2. shall include an alternative liner that meets the performance criteria contained in 40 CFR §§258.40(a)(1) and (c) and that either:

   a. Is a composite system and includes as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; or

   b. Is not a composite system, but includes a Synthetic Liner at least 60-mils thick (or at least 80-mils if of high density polyethylene) that is installed in direct and

uniform contact with the underlying materials; and

B. **Standards for leachate collection**–Include a leachate collection and removal system which conveys to a sump (or other appropriate collection area lined in accordance with §III.A.) all leachate which reaches the liner, and which does not rely upon unlined or clay-lined areas for such conveyance.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 17, 1993.

Maureen Marchè
Administrative Assistant to the Board

ATTACHMENT I

To Resolution No. 93-62

Pursuant to §I.A., in writing or revising the waste discharge requirements for MSW landfills, Regional Water Boards shall implement those portions of the following sections of the federal MSW regulations that either are more stringent than, or do not exist within, Chapter 15.

- **Floodplains**–40 CFR §§258.11 and 258.16
- **Wetlands**–40 CFR §258.12
- **Unstable areas**–40 CFR §§258.15 and 258.16
- **Run-on/Run-off control systems**—40 CFR §258.26
- **Liquids acceptance**–40 CFR §§258.28 [esp. §(a)(2)]
- **Design Criteria**—40 CFR §258.40, according to the provisions of Section III
- **Well/piezometer performance**–40 CFR §258.51
- **Ground-water sampling/analysis**—40 CFR §258.53
- **Monitoring Parameters**–40 CFR §258.54 and Appendix I to Part 258
- **Constituents of Concern**–40 CFR §258.55 and Appendix II to Part 258
- **Response to a release**–40 CFR §§258.55 [esp. §(g)(1)(ii, iii)]
- **Establishing corrective action measures**–40 CFR §§258.56 [esp. §§(c and d)] and 258.57
- **Ending corrective action program**–40 CFR §258.58 [esp. §(e)]
- **Closure/post-closure**–40 CFR §§258.60-258.61 [esp. §§258.60(a-g)]
- **Deed notation**–40 CFR §258.60(i)
- **Ending post-closure**–40 CFR §258.61 [esp. §§(a and b)]
- **Corrective action financial assurance**—40 CFR §258.73

California Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California, 95403

NOTICE OF PUBLIC HEARING

FOR

CONSIDERATION OF ADOPTION
OF AN ORDER
AMENDING
WASTE DISCHARGE REQUIREMENTS

FOR

MUNICIPAL SOLID WASTE LANDFILLS

Humboldt, Del Norte, Mendocino, Siskiyou, Sonoma, and Trinity Counties

On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations pertaining to municipal solid waste landfills. Federal regulations, contained in 40 CFR parts 257 and 258, prescribe minimum standards for siting, operations and closure. Individual States may enact equivalent statewide programs after review and approval by the USEPA.

On June 17, 1993 the State Water Resources Control Board adopted a Policy for Regulation of Discharges of Municipal Solid Waste. The Policy directs the Regional Water Quality Control Boards to amend waste discharge requirements for municipal solid waste landfills to incorporate applicable portions of the federal "Subtitle D" regulations.

The Regional Water Quality Control Board, North Coast Region, proposes to implement the Statewide Policy and applicable provisions of the Federal regulations by adoption of Order No. 93-83, amending the waste discharge requirements of all municipal solid waste landfills in the North Coast Region. This Order will only apply to municipal landfills operating after October 9, 1991.

Although the USEPA has indicated it will consider delaying the implementation of the Federal regulations by six months, such a delay is by no means certain. Also, the delay in implementation will only effect small landfills. Unless modified, the effective date of implementation of the Federal Regulations and proposed Order No. 93-83 is October 9, 1993.

A public meeting to consider comments and objections to the proposed Order will be held on September 22, 1993 at 9:00 a.m. or as soon thereafter as practicable, or as announced in the Regional Board's agenda to be mailed on September 8, 1993. The meeting will be held at Siskiyou County Historical Society, 910 South Main Street, Yreka, California.

All interested persons should submit to the Regional Board office at 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403, written copies of all technical reports, testimony and other evidentiary material concerning this issue by 5:00 p.m. of September 3, 1993. This written material will be submitted to the Regional Board Members and all interested persons along with the full agenda materials.

Persons submitting written testimony and documentary evidence should be present at the hearing and available for cross examination. Testimony at the above scheduled hearing should be limited to a summary of the written evidence and testimony, provided however, that upon a proper showing that evidence is available which was not available at the time the written testimony was submitted, the Board may allow further submission of oral or written testimony. If this showing is not made, the Board may refuse to accept such further oral or written testimony.

The tentative Order, related documents and comments received are on file and may be inspected or copied at the Regional Board office on Mondays 1:30 to 4:30 p.m., Tuesday through Thursday 8:30 to 11:30 a.m. and 1:30 to 4:30 p.m., and Fridays 8:30 to 11:30 a.m.

Benjamin D. Kor
Executive Officer

August 11, 1993

State of California
Regional Water Quality Control Board
North Coast Region

Richard Azevedo
September 27, 1993

AMMENDMENT
EXECUTIVE OFFICER'S SUMMARY REPORT
9:00 a.m., September 22, 1993
Siskiyou County Historical Society
910 South Main Street
Yreka, California

ITEM NO. 7

SUBJECT: Amendment to Order No. 93-83, General Waste Discharge Requirements for Municipal Solid Waste Landfills.

1. Page 4, Section 3(d) should read:

Existing Footprint	The areal projection of land covered by waste...

2. Finding 9 should be added to Order No. 93-83.

The USEPA has announced its intention to set back several of the revised compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

PRELIMINARY STAFF RECOMMENDATION: Adopt Order No. 93-83 as modified.

(item7waste)

State of California
Regional Water Quality Control Board
North Coast Region

Richard G. Azevedo
September 9, 1993

EXECUTIVE OFFICER'S SUMMARY REPORT
9:00 a.m., September 22, 1993
Siskiyou County Historical Society
910 South Main Street
Yreka, California

ITEM: 7

SUBJECT: GENERAL WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL SOLID WASTE LANDFILLS, (NORTH COAST REGION)

DISCUSSION:

On October 9, 1991, the United States Environmental Protection Agency (USEPA) adopted regulations pertaining to regulation of municipal solid waste landfills. These regulations, known as Subtitle D, include siting restrictions; design, monitoring and closure requirements; and financial assurance provisions. The majority of Subtitle D regulations will be self implementing on October 9, 1993 unless individual states receive EPA approval to implement an equivalent set of regulations. States with approved programs will have the ability to approve engineered alternatives and exemptions to various Subtitle D criteria.

The State of California has applied to the USEPA for status as an approved state. While the existing State program is very similar in most regards to the federal regulations, some differences and deficiencies exist. To address deficiencies, the State Board adopted Resolution No. 93-62 implementing the applicable provisions of the Federal regulations. The Regional Boards have been tasked to implement these changes through revisions to individual waste discharge requirements.

Staff has proposed to implement the State Water Board's policy via adoption of a general order modifying the waste discharge requirements of all municipal solid waste landfills. To provide guidance and insure that each Regional Water Board action would be consistent with Subtitle D, State Water Board staff provided a draft "Super Order" with suggested language for staff's consideration. The State Water Board's suggested language was used in drafting portions of Order No. 93-83.

Revisions to the state's solid waste program will have minimal effects on siting new landfills. It does affect the operational and minimum construction criteria for all existing landfills. Operational costs may increase as a result of these new requirements. Estimated costs will be sent under separate cover and discussed during the hearing.

PRELIMINARY STAFF
RECOMMENDATION: Adopt Order 93-83 as proposed.

(subdtalk)

STAFF REPORT

The EPA published final regulations pertaining to municipal solid waste on October 9, 1991. The effective date of implementation was October 9, 1993 except for sections pertaining to groundwater monitoring and financial assurance. These sections would be effective in 1994 and 1995. The federal regulations were promulgated in response to the 1984 Hazardous and Solid Waste Amendments to the Resource Conservations and Recovery Act.

These regulations, known as Subtitle D, set nationwide minimum standards for the siting and operation of municipal landfills. EPA stated its role was "to establish the overall regulatory direction... The actual planning and direct implementation of the solid waste programs however, remains largely State and local functions".

The federal regulations contain so called "hammer" provisions. Although states were authorized to develop their own program, the federal regulations would be self implementing in the event that states did not enact their own program by the effective date of the regulations. In states without equivalent EPA-approved programs, the prescriptive requirements of Subtitle D would be enforced. States with approved programs would be allowed flexibility in approving alternative designs and schedules to those contained in Subtitle D. Another aspect of the federal regulations allows violations to be enforced through citizens suits as well as through state and federal actions.

Negotiations between the State of California and the EPA have been ongoing for some time. Deficiencies in the state's solid waste program and recommended improvements were transmitted to EPA in early 1993. However, it was not until the summer of 1993 that agreements were reached between all parties regarding the exact nature of the changes needed to the state's program. On June 17, 1993, the State Board adopted Resolution No 93-62, Policy for Regulation of Municipal Solid Waste. The Policy was intended to address and correct deficiencies between the State Board's Chapter 15 regulations and the Subtitle D regulations.

The Policy was submitted to the EPA as part of a joint State Water Board/California Integrated Waste Management Board application. California requested that the EPA approve the State program as equivalent to the Federal regulations. California will likely receive approval from the EPA prior to the October 1993.

The State Board Policy requires that the Regional Board implement the Policy by amending the waste discharge requirements of all municipal solid waste landfills. To assist the Regional Boards in amending waste discharge requirements and assure that each Regional Board Order would be equivalent to Subtitle D, State Board staff drafted guidance to all the Regional Boards. This guidance, which identified Chapter 15 deficiencies and suggested specific language to meet the federal requirements, was supplied to each Regional Board in July 1993 in the form of a general Order amending the waste discharge requirements of all municipals landfills. State Board guidance and language was used in drafting portions of Order No. 93-83.

A draft Order was sent to all dischargers and interested parties on August 11, 1993. Comments received to date have been included in Order No. 93-83 and the revised draft order was resubmitted to all dischargers.

COMPARISON OF FEDERAL AND STATE REGULATIONS

The State Water Board has recommended that each Regional Board adopt a single order amending the waste discharge requirements of all MSW landfills.

In order to provide state wide consistency as well as assuring that individual Regional Board actions would be considered equivalent to the Subtitle D regulations, State Board staff prepared draft language that may be incorporated into a Regional Water Board's waste discharge requirements. The State Water Board's suggested language was used as guidance in developing portions of Order No. 93-83. A key point in this process is that the scope of the revised solid waste program has been defined for the Regional Board. Staff's flexibility in developing the content of Order No. 93-83 has been limited.

State Water Board Resolution No. 93-62 presents the areas where Chapter 15 is deficient and must be upgraded to meet Subtitle D requirements. The list of Chapter 15 deficiencies is presented below.

FEDERAL REGULATIONS THAT ARE MORE STRINGENT OR DO NOT EXIST WITHIN CHAPTER 15

Applicability of Subtitle D	40 CFR 258.1
Liner Design	40 CFR 258.40
Floodplains	40 CFR 258.11. and 258.16
Wetlands	40 CFR 258.12
Unstable Areas	40 CFR 258.258.15 and 258.16
Liquids Acceptance	40 CFR 258.28
Well Piezometer Performance	40 CFR 258.51
Ground Water Sapling	40 CFR 258.53
Monitoring Parameters	40 CFR 258.54
Constituents of Concern	40 CFR 258.55
Response to a Release	40 CFR 258.55
Corrective Action Program	40 CFR 258.56 and 258.57 and 258.58
Closure/ Post Closure	40 CFR 258.60 and 258.61(a-g)
Deed notation	40 CFR 258.60
Ending Post Closure	40 CFR 258.61
Corrective Action/ Financial assurance	40 CFR 258.73

A detailed discussion of each individual issue is presented below:

Applicability

Subtitle D and Order No. 93-83 apply only to landfills that receive, or have received, municipal solid waste. Regulation of other Class III landfills will be unchanged.

Landfills that do not receive wastes after October 9, 1991 are exempted from the federal regulations. Landfills that receive waste after October 9, 1991 but close prior to October 9, 1993 are also exempted from the federal regulations with the exception of the final cover requirements in 40 CFR 258.60(a) provided that the final cover is applied within six months of the last receipt of waste.

Subtitle D categorizes several different types of landfills for the purpose of regulation. They are:

1. New landfills which will be subject to all applicable provisions of the Federal regulations.

2. Lateral expansion of existing landfills which will be subject to all applicable provisions of the federal regulations.

3. Landfills operating within their waste disposal footprint as determined on October 9, 1993. These landfills will be subject to all applicable provisions of the federal regulations with the exception of the liner requirements.

Liners

Existing State regulations for Class III landfills require they be located where site characteristics ensure that no impairment of the beneficial uses of surface water or groundwater will occur. Where site characteristics alone will not ensure water quality protection, Class III landfills must be equipped, at a minimum, with a one foot clay liner having a permeability of 1×10^{-6} cm/sec or less.

The Federal regulations require that all MSW landfills have a composite liner. The prescriptive composite liner is a 40 mil thick synthetic liner directly underlain by a two foot thick clay liner having a permeability of 1×10^{-7} cm/sec or less.

Order No. 93-83 contains provisions to implement the federal composite liner standards at all landfills. The liner requirements will apply to new landfills and lateral expansions of existing sites. Landfills operating within their waste disposal footprint, defined on October 9, 1993, will not be subject to the liner requirements. At landfills that have constructed a Chapter 15 style liner before the effective date of this Order but have not received waste, the clay liner must be retrofit with a 40 mil thick synthetic liner.

If California receives approval from EPA for the modified State regulations, Regional Board staff may approve an alternative liner design if it provides the same level of protection as the prescriptive design described above.

Siting Criteria-Floodplains

Chapter 15 states that landfills will be designed and operated to prevent inundation or washout due to a 100-year flood.

Subtitle D retains this language and adds the following requirements:

1. The landfill will not restrict the flow of the 100-year flood; and

2. Will not reduce the temporary water storage capacity of the floodplain during the flood.

Order No. 93-83 modifies the federal language in that landfills shall not materially restrict the flow, or materially reduce the storage capacity of the floodplain, during a 100-year flood. This modification has been approved by the EPA.

Existing landfills must document compliance with these provisions by January 15, 1994. Landfills failing to meet these provisions are required under federal regulations to close by October 1996. In approved states the mandatory closure deadline may be extended 2 years by the Regional Water Board.

Siting Criteria-Wetlands

Subtitle D precludes siting or expansion of landfills in wetlands unless a list of specific factors have been considered and certain mitigating actions have been carried out to the greatest extent feasible.

Chapter 15 contains no such restrictions regarding landfill siting. Although no explicit language exits in Chapter 15 regarding expansion into a wetland, general provisions of Porter-Cologne and Chapter 15 would require a showing similar to that contained in the federal regulations.

Order No. 93-83 prohibits expansion into a wetland area unless the factors listed in 40 CFR 258.12(a) are met.

Siting Criteria-Fault Areas

Chapter 15 states that new landfills and expansion of existing landfills shall not be located on a known Holocene fault.

Subtitle D states that new landfills and expansions of existing sites shall not be located within 200 feet of a Holocene fault. Approved states may allow a smaller setback provided the discharger demonstrates that the landfill has been designed to withstand the appropriate seismic forces resulting from an earthquake along the fault.

Subtitle D is more restrictive than Chapter 15 in that the minimum setback is defined in the regulations. However, during the design process under either program, a landfill must be designed to withstand the seismic forces arising from an earthquake along the fault. In that sense the state and federal program are equivalent.

Order No. 93-83 contains the federal language regarding minimum and alternative setbacks.

Siting Criteria-Unstable Areas

Subtitle D requires that new and existing landfills as well as lateral expansions of existing sites located in unstable areas must demonstrate the integrity of the landfill will not be disrupted. The discharger must consider specific factors when determining whether an area is unstable.

Chapter 15 does not explicitly require consideration of the factors presented in Subtitle D. Although these factors are not explicitly included in Chapter 15, any technical review of a landfill within an unstable area would address these factors at a minimum. There is no practical difference between the state and federal program in this regard. However, the State Board has agreed to modify the state program and include the federal language for the sake of clarity.

Order No. 93-83 includes the federal language by referencing factors presented in 40 CFR 258.15.

Existing landfills must document compliance with this section by January 15, 1994. Existing landfills that do not demonstrate their integrity must close by October 9, 1996. In approved states the mandatory closure deadline may be extended 2 years by the Regional Water Board.

Piezometer Performance

State Water Board Resolution No. 93-62 requires that the Regional Water Board implement portions of the Federal regulations that are more stringent or do not exist within Chapter 15. Subtitle D presents performance criteria for piezometers and monitoring wells. Although Chapter 15 requirements meet almost all the federal performance standards for monitoring wells, Chapter 15 does not explicitly apply to piezometers and does not require that the discharger maintain the monitoring well/piezometer in a functional condition throughout the life of the program.

As a practical matter, all wells and piezometers are maintained in a functional condition. If damaged, they are replaced. Therefore, the current state program is equivalent to the Subtitle D requirement. This provision has not been included in Order No. 93-83 but will be enforced as part of ongoing monitoring and operation.

Design criteria for piezometers is generally not included in waste discharge requirements. Implementation of the federal criteria will occur during staff's technical review of any proposed piezometers.

Disposal of Liquids to MSW Landfills

Chapter 15 allows methane gas recovery condensate to be returned to the landfill where it originated or disposed at a different landfill if it is equipped with a leachate collection system.

Subtitle D is more restrictive in that it prohibits the disposal of leachate and gas condensate to MSW landfills unless the landfill has a composite liner meeting the federal performance standards. Even then, landfills may only accept their own leachate or gas condensate.

Groundwater Monitoring Program

While Chapter 15 and Subtitle D are very similar, the State Board has identified several areas where Chapter 15 is deficient. These are discussed below.

Also, some discussion concerning the intent of Order No. 93-83 and the sections pertaining to groundwater monitoring is warranted.

Order No. 93-83 was intended to identify areas where Chapter 15 needed improvement to be considered equivalent to the federal regulations. For those areas, Order No. 93-83 presents revised language and an implementation schedule.

While the draft Order provided to the Regional Water Board on August 25, followed this approach for the sections pertaining to groundwater monitoring, the approach in Order No. 93-83 in the agenda package has been substantially revised based on comments by the State Water Board.

Under the original approach, the responsibility to develop a monitoring program rested with the discharger. Considering the complex nature of the new state and federal monitoring requirements, it was anticipated that rural counties and dischargers would need to hire outside consulting services to prepare the monitoring program. These programs would be submitted to Regional Water Board staff for review and approved only six months before the statutory implementation deadline.

Commentors noted that this approach would have required dischargers to allocate sufficient money to develop a complete program. Based on experience in implementing the Chapter 15 monitoring requirements, rural counties and dischargers may encounter difficulty developing a complete program by the submittal date. Since background concentrations for any monitoring parameter need to be developed, it would be difficult for a discharger to meet the implementation deadline if their monitoring program was deemed incomplete by the Regional Water Board.

Also, sufficient staff resources may not be available under the current program to revise all the monitoring programs within a 6 month period. If for any reason, complete monitoring programs are not in place by the implementation date, dischargers are exposed to citizen lawsuits.

To help avoid these problems, State Board staff developed a generic monitoring program that can be implemented by all dischargers. Dischargers may select from the preapproved monitoring and data comparison techniques contained in the program, reducing their cost and dependence on outside consulting services. The monitoring program is now contained in revised Order 93-83 and is implementable.

Dischargers have the option of developing a site specific program for staff approval. The generic monitoring program requires that dischargers immediately identify any additional compounds that should be included on the list of potential contaminants arising from the landfill. Background concentrations for these compounds should be developed immediately.

If compounds are not present in the landfill, as determined by routine sampling from the leachate collection system, then further sampling and monitoring for these compounds in the event of a release is not needed. At landfills already having detectable releases, this provision may provide a significant cost savings to the discharger.

A discussion of significant differences between Subtitle D and Chapter 15 is presented below.

Monitoring Parameters during Detection Monitoring

Chapter 15 allows flexibility in selecting routine monitoring parameters during detection monitoring.

Subtitle D presents a list of compounds that must be included as monitoring parameters. Approved states are allowed the flexibility to alter this monitoring list.

However, the Subtitle D monitoring list and the list of compounds included in existing waste discharge requirements are equivalent, resulting in no cost increase or change at many MSW landfills.

Order No. 93-83 includes a list of monitoring parameters which includes the federal list.

Monitoring Parameters After a Release has Occurred

Chapter 15 states that the discharger shall define the nature and extent of a release once it is detected. How this is accomplished is typically determined on a case by case basis.

Under Subtitle D once a release is detected, the discharger is required to sample all monitoring points for all compounds listed in Appendix II of Subtitle D. Appendix II adds roughly 100 more compounds to the list of monitored compounds, increasing the monitoring costs.

Approved states have some flexibility in removing Appendix II compounds from the list of monitored compounds. The EPA has approved the State Water Board's technique of sampling the leachate collection system and determining exactly what compounds are present within the landfill. Appendix II compounds present in the leachate need not be monitored during evaluation of a release. For landfills that do not have a leachate collection system, there is no mechanism to determine which compounds are present in the landfill. In the event of a release, these landfills will be required to analyze for all Appendix II compounds until sufficient data from the monitoring wells is obtained. At that point in time, a reduction in the sampling frequency may be evaluated.

Order No. 93-83, Sections 12 and 14 contain language implementing these provisions.

Actions Required during a Release

Subtitle D differs from Chapter 15 in that one additional well must be placed at the downgradient property boundary in the event of a release.

In the event of an offsite release Subtitle D differs from Chapter 15 in that it explicitly states how and when affected offsite residents will be notified. While Chapter 15 does not have this explicit language, this notification of offsite residents is a standard procedure. The net difference is in the timing of the notification.

Order No. 93-83 includes language equivalent to the federal requirements.

Corrective Action Program

Both Chapter 15 and Subtitle D require that the discharger evaluate and implement corrective action measures in the event of a release. However, there are some differences in the factors to consider in evaluating and implementing corrective actions. Since corrective actions are very specific to a particular site, the federal regulations will be implemented during the review of an individual discharger's corrective action report.

Many of the federal requirements for corrective action are technical considerations that are included in the Regional Boards's program as part of the technical review of any corrective action report.

Closure/Post Closure Plans

Subtitle D requires that existing landfills submit closure and post closure plans on October 9, 1993. Chapter 15 requires that a closure plan be submitted 180 days prior to closure. However, the California Integrated Waste Management Board has required submittal of closure plans in a phased fashion over the last several years in accordance with Title 14.

Many of the landfills in the North Coast Region have already submitted preliminary or final plans to both the Regional Board and the Integrated Waste Management Board. Order No. 93-83 implements the federal provisions and alters the existing submittal schedule. The Integrated Waste Management Board is also revising its program to be consistent with the federal regulations.

Subtitle D regulations require that the final cover be equivalent to the landfill liner with regards to the amount of water moving through each system. These cover requirements will have no effect on closure of unlined and Chapter 15 style (single clay liner) lined landfill. Cover upgrades will be needed in the future when closing composite lined landfills.

Subtitle D requires that a notification be placed in the property deed stating that the site has been used as a MSW landfill. Order No. 93-83 includes the deed notification clause.

Financial Assurances

Chapter 15 requires that financial mechanisms be established but is silent on the exact mechanisms. However, Title 14, administered by the Integrated Waste Management Board, contains explicit financial mechanisms. The current coordinated approach between agencies is to develop a financial mechanism that meets the IWMB requirements.

While Subtitle D specifies the nature of the financial mechanisms, the IWMB is modifying their program to conform to the federal requirements.

The IWMB will continue as the lead agency for financial assurance. Article 5, Chapter 15 requirements regarding the establishment of financial mechanisms to address potential releases from the facility will remain in effect until Chapter 15 is modified or the State Board and IWMB negotiate an MOU regarding this issue.

Potential Changes to the Solid Waste Program

On July 28, 1993, EPA issued proposed changes to Subtitle D. They are:

1. Defer the implementation date of Subtitle D from October 9, 1993 to April, 1994 for those landfills accepting less than 100 tons of waste per day. This revision would affect a majority of the landfills in the North Coast Region.

2. Defer the implementation date of the financial assurance provisions from April 1994 to April 1995.

3. Landfills closing prior to the Federal Deadline that install final cover by October 1994 would be exempted from the Subtitle D regulations.

Staff proposes to track this issue and update the Regional Board if the proposed changes become final before the September 22 meeting.

IMPACTS TO THE REGULATED COMMUNITY

This part of the staff report is under preparation. It will be sent under separate cover and discussed at the public hearing.

WATER QUALITY
CONTROL BOARD
REGION 1

SEP 9 '93

RECEIVED

SEP 3 - 1993

JPC

☐ BK ___ ☐ RK ___
☐ FR ___ ☐ LR ___
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☐ ALL STAFF ☐ FILE

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GOVERNOR PETE WILSON

September 3, 1993

Mr. John P. Caffrey, Chairman
State Water Resources Control Board
901 P Street
Sacramento, California 95814

Recently, I signed AB 1827 (Sher) to comply with the mandated requirements of the new federal law governing national standards for solid waste management. California was required to comply with the new solid waste standards when Congress reauthorized the Resources Conservation and Recovery Act (RCRA), the primary federal statute governing solid waste.

This is yet another new, unfunded, Federal mandate which will create an additional burden on local government in California, especially already distressed rural counties.

As I have stated repeatedly, I remain firmly opposed to all such unfunded federal mandates. Unfortunately, unless Congress amends RCRA or U.S. EPA amends its regulations, costs for both taxpayers and business will increase. However, the failure to pass AB 1827 would have resulted in federal sanctions which would have an even more onerous burden on both public and private landowners.

AB 1827 accomplishes the changes in California law necessary for the state to obtain final solid waste program approval from the United States Environmental Protection Agency (U.S. EPA). As an approved state, California will be able to utilize both the flexibility in the federal program to aggressively work with local governments to meet their unique circumstances and avoid even more onerous and costly federal sanctions.

New federal regulations, known as Subtitle D under RCRA, require county landfills to adhere to strict new standards beginning October 9, 1993. Subtitle D requires a number of major and costly changes in the way these facilities are designed, operated, and ultimately closed.

In order to assist landfill operators throughout the state in making this transition and dealing with these changes in the most prompt and efficient manner possible, I have directed the state agencies to pursue three immediate courses of action.

SACRAMENTO, CALIFORNIA 95814 (916) 445-2841

First, I have directed my Washington office to aggressively pursue waivers with the United States Environmental Protection Agency to grant an extension of time for small landfills to come into compliance with these new requirements.

Second, our state will continue to work with the United States Environmental Protection Agency on ways to work with the United States Environmental Protection Agency on ways to maximize California flexibility under this program. Through the passage of this bill, the statutory provisions are in place to enable California to become one of the first "approved states' under these new Subtitle D regulations. We will aggressively pursue every mechanism to provide local governments with the greatest flexibility possible in order to respond to their unique circumstances. It is important to note that much of the flexibility in the federal program is only available to approved state programs. I have asked the California Integrated Waste Management Board and the State Water Resources Control Board to institute all areas of currently allowed flexibility by the October 9, 1993, deadline.

Third , I have asked the state's Integrated Waste Management Board and the Water Resources Control Board to jointly conduct a series of informational workshops in September for public and private landfill operators, local governments and other interested parties so that they may have full information and assistance in complying with the requirements of the law.

If you have any questions or recommendations regarding the implementation of this regulation, please ask your staff to contact Paul Blais, Special Assistant to the Secretary at the California Environmental Protection Agency at (916) 324-7584

Sincerely,

Pete Wilson

PETE WILSON

Enclosure

cc: Paul Blais

SUBTITLE D WORKSHOP SCHEDULE

Friday, September 17, 1993

Ventura County
9:00 am - 3:00 pm

Poinsettia Pavillion
Santa Paula Room
3451 Foothill Road
Ventura, California

Monday, September 20, 1993

Alameda County
9:00 am - 3:00 pm

Alameda County Waste Management Authority
Westgate Building
1933 Davis Street, Suite 305
San Leandro, California 94577

Thursday, September 23, 1993

Sacramento County
10:00 am - 5:00 pm
California Intergrated Waste Managment Board
Board Room
8800 Cal Center Drive
Sacramento, California 95826

Monday, September 27, 1993

Orange County
9:00 am - 3:00 pm

Orange County Public Library
Multipurpose Room
1501 East St. Andrews Place Street
Santa Ana, California

Wednesday, September 29, 1993

Fresno County
10:00 am - 3:00 pm

Fresno county Board of Supervisors
2281 Tulare Street, Room 301
Hall of Records
Fresno, California 93721-2198

SUBTITLE D WORKSHOP SCHEDULE
Page Two

Thursday, September 30, 1993

Shasta County
1:00 pm - 5:00 pm

Redding City Council chambers
1313 California Street
Redding, California

Monday, October 4, 1993

San Diego County
10:00 am - 3:00 pm

San Diego County Board of Supervisors
North Chambers, Room 310
1600 Pacific Highway
San Diego, California

RECEIVED

CITY OF
Santa Rosa

MAR 12 P 12:16

March 11, 1997

SONOMA COUNTY DEPT.

RICH DOBLE
SONOMA COUNTY DEPT OF
TRANSPORTATION AND PUBLIC WORKS
575 ADMINISTRATION DRIVE ROOM 117A
SANTA ROSA, CA 95403

PROPOSED WASTEWATER DISCHARGE PERMIT NUMBER SR-IW5202

Pursuant to the Santa Rosa City Code and in accordance with guidelines mandated by State and Federal Regulations, a system of Wastewater Discharge Permits has been initiated by the City.

This letter is to inform you of the permit requirements proposed for your facility at 500 MECHAM ROAD, 7175 ROBLAR ROAD, AND 4376 STAGE GULCH ROAD. **Within ten (10) days you must return the attached certification statement acknowledging receipt of your wastewater discharge permit.**

The requirements as indicated will become permanent unless, within thirty (30) days of the date of this letter, you have reason to disagree with the provisions of the proposed permit. Should you have reason to disagree with any of the provisions of this permit you are instructed to contact this office, in writing, at 4300 Llano Road, Santa Rosa, CA 95407.

If no response to the provisions of the permit is received within that time frame the requirements, as indicated, will become permanent.

The proposed permit requirements as set forth in the discharge permit must be complete and in compliance within 30 days of the date of this letter.

LYNN M. SMALL
Environmental Services Superintendent

LMS:dlr
Enclosure

PERMIT NUMBER SR-IW5202

Company Name:	**SO.CO. DEPT. OF TRANSPORTATION & PUBLIC WORKS**
Mailing Address:	575 ADMINISTRATION DR. ROOM 117A SANTA ROSA, CA 95403
Facility Address:	**500 MECHAM RD., PETALUMA, CA 94952** **7175 ROBLAR RD., PETALUMA, CA 94952** **4376 STAGE GULCH RD., SONOMA, CA 95476**

The above Industrial User is authorized to discharge industrial wastewater to the City of Santa Rosa's sewer system in compliance with the City Sewer Code, Title 15, any applicable provisions of Federal or State law or regulation, and in accordance with discharge point(s), effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit is granted in accordance with the application filed on DECEMBER 21, 1996, and in conformity with plans, specifications, and other data submitted to the City of Santa Rosa in support of the above application.

PART I WASTEWATER DISCHARGE LIMITATIONS AND SELF MONITORING REQUIREMENT

PARAMETER	EP METHODS	MG/L DAILY MAX	SAMPLE FREQUENCY	SAMPLE TYPE
Antimony (T)	204.2	153	Annual	Pond Comp.
Ammonia (T)	350.2	190	"	" "
Arsenic (T)	206.3	0.47	"	" "
Beryllium (T)	210.1	0.5	"	" "
Cadmium (T)	213.1	0.04	"	" "
Chromium (T)	218.1	1.71	"	" "
Copper (T)	220.2	0.2	"	" "
Cyanide (T)	335.2	0.2	"	" "
Lead (T)	239.1	0.3	"	" "
Mercury (T)	245.1	0.0003	"	" "
Nickel (T)	249.1	1.51	"	" "
Selenium (T)	270.3	2.7	"	" "
Silver (T)	272.1	ND	"	" "
Thallium (T)	279.1	3.9	"	" "
Zinc (T)	289.1	1.63	"	" "
pH	150.1	6.0-9.5	"	" "
BOD	405.1	1,400	"	" "
Suspended Solids	160.2	16,800	"	" "
TTO	8260/8270	2.13	"	" "

Annual sampling is required. However, should any test result exceed the limits an explanation of the violation and resampling will be required.

Term "TTO" shall mean Total Toxic Organics, which is the summation of all quantifiable values greater than .01 mg/l for listed toxic organics.

The limits listed above will apply only when sampling occurs at the end of pipe which includes total facility effluent.

T = Total
BOD = Biochemical Oxygen Demand
COD = Chemical Oxygen Demand
MG/L = Parts Per Million (PPM)
Pond Comp = sample 4 different locations of each leachate pond and composite the sample.

pH is taken routinely from hauler loads at the Laguna Treatment Plant. If the pH of the load is outside the acceptable range of 6.0 - 9.5, it will not be allowed to discharge.

All analysis shall be performed by a California State Certified Laboratory and all test procedures shall comply with standards set forth in Title 40 Code of Federal Regulations, Part 136.

PROHIBITIONS

- Discharges containing metal pickling or etching wastes or plating solutions, whether neutralized or not.

- Discharges containing phenols or other taste and odor producing substances in concentrations exceeding limits which may be established by the engineer as necessary to meet water quality requirements.

- Any wastewater having a temperature which will inhibit biological activity in the publicly owned treatment works treatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into the publicly owned treatment works which exceeds 40° centigrade (104° Fahrenheit).

- Materials which exert or cause in the sewerage system or receiving waters:

  a. Unusual concentrations of either inert suspended solids (such as, but not limited to, soil solids, Fuller's earth, lime slurries, and lime residues) or of dissolved inorganic solids (such as, but not limited to, sodium chloride and sodium sulfate) in excess of 3,000 milligrams per liter.

  b. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).

- Discharges in such quantities or such qualities that they are not amenable to treatment or reduction by wastewater treatment processes employed, or are amenable to treatment only to such a degree that the treatment plant effluent cannot meet water quality requirements.

PART II SPECIAL CONDITIONS/COMPLIANCE SCHEDULES
SOLID WASTE LANDFILL LEACHATE

This permit is for leachate from the following County landfills:

Central - 500 Mecham Road, Petaluma, CA 94952
Roblar Road Site - 7175 Roblar Road, Petaluma, CA 94952
Sonoma Valley - 4376 Stage Gulch Road, Sonoma, CA 95476

1. **SONOMA COUNTY LANDFILL (LEACHATES)** discharges to the sanitary sewer will comply with **City of Santa Rosa Sewer Use Ordinance #3047,** see page 2, Local limits.

2. **SONOMA COUNTY LANDFILL** is required to perform self monitoring of the landfill leachate pond in the **fourth quarter of each year prior to the start of hauling to the City of Santa Rosa Subregional Treatment Plant.** The samples shall be representative of each of the landfill leachate ponds and wastewater to be transported. See page 3.

3. **SONOMA COUNTY LANDFILL** must submit pond sampling results **prior to the end of the fourth quarter each year.**

4. **SONOMA COUNTY LANDFILL** must maintain all pretreatment in proper working order per design and manufacturers specification, i.e. drains, pipes, gates, interceptors, liners, etc.

5. **SONOMA COUNTY LANDFILL** must maintain a complete file of all pretreatment operations, calibrations, shipping manifest, certified lab analyses, and all other pertinent information regarding this permit. All information **must be maintained on the premises for a minimum of three years** unless the user is involved in any enforcement actions with local, state, or federal agencies. In this case, all documents shall be maintained until all proceedings are finalized. Such records shall be subject to regular inspection by Industrial Waste Inspectors.

6. **THE CITY OF SANTA ROSA** will not accept any wastewater at the Subregional Treatment Plant that is determined to be hazardous under **Title 22, Article 6, Section 66471 of the California Administrative Code.**

7. Trucked wastewater requiring chemical treatment i.e. chlorine to control sulfides must be dosed at a level so as not to be a nuisance or hazard to truck driver or treatment plant personnel.

8. Request for and receive **prior approval** before changing any process that would cause a change in flow, constituent characteristics, or strength of regulated process effluent.

PART III REPORTING REQUIREMENTS

1. The Industrial User shall notify the City immediately upon any accidental or slug discharge to the sanitary sewer as outlined in the City Sewer Code, Title 15. Formal written notification discussing circumstances and remedies shall be submitted to the City within (5) five days of the occurrence.

2. Any upset experienced by the Industrial User of its treatment processes that places it in a temporary state of non-compliance with wastewater discharge limitations contained in this permit or other limitations specified in the City Sewer Code, Title 15 shall be reported to the City immediately. A detailed report shall be filed within (5) five days.

3. The Industrial User shall submit an Accidental Spill Prevention Plan to the City within 90 days of the issuance of this permit if such a plan has not been submitted and is required in Part II.

4. The Industrial User shall notify the City and apply for a revised permit prior to the introduction of new wastewater or pollutants or any substantial change in the volume or characteristics of the wastewater being introduced into the Publicly Owned Treatment Works (POTW) from the users industrial processes.

5. The Industrial User shall conduct self-monitoring and reporting if such conditions are imposed initially or within the effective period of this permit. Monitoring shall be provided by the user at his expense, using a State certified laboratory. The user's laboratory, where available, may be used if approved by the Engineer.

6. The Industrial User shall agree to and proceed with a compliance schedule imposed initially and specified in Part II of this permit, or imposed within the effective period of this permit.

   Not later than (14) fourteen days following each date in the compliance schedule, the Industrial User shall submit a progress report to the City. This report must indicate whether or not the increment of progress was met on the date, the reason(s) for any delay, and what steps are being taken by the User to return to the schedule established. In no event shall more than (9) nine months elapse between such progress reports to the City.

   Within (90) days of the final compliance date specified in Part II of this permit, the Industrial User shall be required to submit a final compliance report. The industrial User shall be required to sample its wastewater for the pollutants specified in Part I, and report compliance. Any reasons for not complying and any steps taken by the User to comply shall be part of the report.

7. All reports shall be submitted to the following address:

SUBREGIONAL WATER MANAGEMENT SYSTEM
INDUSTRIAL WASTE SECTION
4300 LLANO ROAD
SANTA ROSA, CA 95407
(707) 543-3369

PART IV STANDARD CONDITIONS

1. The Industrial User shall comply with all general prohibitive discharge standards set forth in City Sewer Code, Title 15 except as specifically permitted in Part I. However, no special agreement or arrangement between the City and any person or agency shall be allowed to contravene State or Federal standards or the City's technically based local limits.

2. The Industrial User shall not contribute the following substances to the POTW:

   a. Any liquids, solids or gasses which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with any other substances to cause fire or explosion or be injurious in any other way to the POTW or to the operation of the POTW.

   b. Solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater treatment facilities.

   c. Any wastewater having a pH less than 6.0 or greater than 9.5 or wastewater having any other corrosive property capable of causing damage or hazard to structures, equipment, and/or personnel of the POTW.

   d. Any wastewater having a temperature which will inhibit biological activity in the POTW treatment plant resulting in interference, but in no case with a temperature at the introduction into the POTW which exceeds 40 degrees Celsius (104 degrees Fahrenheit).

   e. Any pollutants, including oxygen demanding pollutants (BOD, etc.) released at a flow rate and or pollutant concentration which the Industrial User knows or has reason to know will cause interference to the POTW. In no case shall a slug load have a flow rate or pollutant concentration that exceeds for any time period longer than (15) fifteen minutes more than (5) five times the average 24 hour concentration, quantities, or flow during normal operations.

3. LIABILITY

   The Industrial User will be held liable for any damage to the City's collection system and wastewater treatment plant resulting from unauthorized discharge into the District's sewers.

4. INSPECTION AND ENTRY

   The permittee shall allow the City of Santa Rosa, Industrial Waste Section, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and

e. Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

5. RECORDS RETENTION

The Industrial User shall retain and preserve for no less than (3) three years, any records, books, documents, memoranda, reports correspondence and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or in behalf of the User in connection with its discharge. All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City shall be retained and preserved by the Industrial User until all enforcement activities have concluded and all the periods of limitation with respect to any and all appeals have expired.

6. CONFIDENTIAL INFORMATION

Except for data determined to be confidential under City Sewer Code, Title 15, all reports required by this permit shall be available for public inspection at the Industrial Waste offices at 4300 Llano Road, Santa Rosa.

7. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the User shall record the following information:

a. The exact place, date and time of sampling;
b. The dates the analyses were performed;
c. The person(s) who performed the analyses;
d. The analytical techniques or methods used; and
e. The results of the required analyses.

8. DILUTION

No Industrial User shall increase the use of potable or process water or, in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

9. PROPER DISPOSAL OF PRETREATMENT SLUDGES AND SPENT CHEMICALS

The disposal of spent chemicals and sludges generated shall be done in accordance with Section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recover Act.

10. SIGNATORY REQUIREMENTS

All reports required by this permit shall be signed by a principal executive officer of the user or his/her designee.

11. REVOCATION OF PERMIT

The permit issued to the Industrial User by the City may be revoked when after inspection, monitoring and analysis it is determined that the discharge of wastewater to the sanitary sewer system is in violation of Federal, State or local laws, ordinances or regulations. Additionally, falsification or intentional misrepresentation of data or statements pertaining to the permit application or any other required reporting form, shall be cause for permanent revocation.

12. LIMITATION ON PERMIT TRANSFER

Wastewater discharge permits are issued to a specific user for a specific operation and are not assignable to another user or transferrable to any other location without the prior written approval of the City. Sale of a user shall obligate the purchaser to seek prior written approval of the City for the continued discharge to the sewer system.

13. FALSIFYING INFORMATION OR TAMPERING WITH MONITORING EQUIPMENT

Knowingly making any false statement on any report or document required by this permit or knowingly rendering any monitoring device or method inaccurate, may result in punishment under the criminal laws of the State, as well as in the imposition of civil penalties and relief.

14. MODIFICATION OR REVISION OF THE PERMIT

a. The terms and conditions of this permit may be subject to modification by the City at any time as limitations or requirements as identified by the City Sewer Code, Title 15, are modified or other just cause exists.

b. This permit may also be modified to incorporate special conditions resulting from the issuance of a special order.

c. The terms and conditions may be modified as a result of EPA promulgating a new federal pretreatment standard.

d. Any permit modifications which result in new conditions in the permit shall include a reasonable time schedule for compliance if necessary.

15. DUTY TO REAPPLY

The City shall notify a User (90) ninety days prior to the expiration of the User's permit. Within (45) forty five days of the notification, the User shall reapply for reissuance of the permit on a form provided by the City.

16. SEVERABILITY

The provisions of this permit are severable, and if any of the provisions of this permit, or the application of any provisions of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

17. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any other exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of Federal, State, or local regulations.

permit.

TO BE COMPLETED AND RETURNED WITHIN 10 DAYS

TO:
SUBREGIONAL WATER RECLAMATION SYSTEM
INDUSTRIAL WASTE SECTION
4300 LLANO ROAD
SANTA ROSA CA 95407

1. I have received Wastewater Discharge Permit #SR-IW5202 and acknowledge my responsibility to read, understand, and comply with the requirements and regulations contained therein.
DATE RECEIVED 3-15-97

CERTIFICATION

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

SONOMA COUNTY COMPANY NAME	WASTEWATER DISCHARGE PERMIT #
R. W. Doble RESPONSIBLE PERSON	3/15/97 DATE
R. W. Doble PRINT NAME	Div. Mgr. Engr. & Oper. TITLE

THIS DOCUMENT MUST BE SIGNED BY THE MOST RESPONSIBLE PERSON OF SONOMA COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS - (LEACHATE). THIS INCLUDES THE OWNER, PRESIDENT, CORPORATE OFFICER, OR ANY OTHER REPRESENTATIVE OF THE ORGANIZATION IN A DECISION MAKING CAPACITY. THE PERSON SIGNING THIS DOCUMENT IS LEGALLY RESPONSIBLE FOR ALL INFORMATION CONTAINED HEREIN, AND BECOMES LIABLE FOR ANY AND ALL FUTURE ENFORCEMENT ACTIONS RELATED TO THIS INFORMATION.

CERTIF10.FM

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES
Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

March 22, 1996

Mr. Ken Wells
Department of Transportation and Public Works
Integrated Waste Management Division
575 Administration Drive, Room 117A
Santa Rosa, CA. 95403

Re: Central Compost Site, 49-AA-0260

Dear Ken:

The California Integrated Waste Management Board has concurred with the issuance of a Standardized Composting Permit No. 49-AA-0260 for the Central Compost Site. Enclosed is a copy of Permit Decision No. 96-84, dated February 28, 1996, a Notice of Determination posted March 21, 1996 and the permit issued March 21, 1996.

Sincerely,

ROBERT A. SWIFT, R.E.H.S.
Senior Solid Waste Specialist

RAS/mb

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1996 MAR 26 A 10: 12
SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

California Integrated Waste Management Board
Permit Decision No. 96-84
February 27, 1996

WHEREAS, Sonoma County Department of Transportation and Public Works proposes to operate a green waste composting facility on 35 acres (25 acres for the composting area and 10 acres for the processing area) of intermediate cover area of the Central Disposal Site under a Standardized Permit; and

WHEREAS, Sonoma County Public Works Department (County), the lead agency, prepared a Negative Declaration (ND), SCH #9201377, for the proposed project. The document was approved by the lead agency on March 24, 1992, and a Notice of Determination was filed on May 11, 1992; and

WHEREAS, the LEA, in consultation with Board Staff, prepared and submitted an addendum to the ND on January 30, 1996; and

WHEREAS, Board staff reviewed the ND, response to comments, and addendum for the proposed project, and determined that the CEQA document is adequate for the Board's evaluation of the proposed project for those project activities which are within this Agency's expertise and/or powers or which required to be carried out or approved by the Board; and

WHEREAS, the design capacity is 36,000 cubic yards of active compost on-site at any one time; and

WHEREAS, Sonoma County Department of Health Services, acting as the Local Enforcement Agency, has submitted to the Board for its review and concurrence in, or objection to, a new Standardized Permit for the Central Compost Site; and

WHEREAS, the proposed permit is consistent with the project description in the CEQA document; and

WHEREAS, the Board finds that all state and local requirements for the proposed permit have been met, including consistency with Board standards, conformance with the County Integrated Waste Management Plan, and compliance with CEQA; and

WHEREAS, LEA and Board staff have evaluated the application and proposed permit and determined that the facility will be able to operate in compliance with the applicable State Minimum Standards and standardized permit terms and conditions.

State of California
CIWMB FORM 5000 (revised 2/95)

California Integrated Waste Management Board

STANDARDIZED COMPOSTING PERMIT

1. Facility/Permit Number (SWIS): 49-AA-0260

2. Name of Facility:	Address/Location:
Central Compost Site	500 Mecham Road Petaluma, CA 94952

3. Local Enforcement Agency:	Address:
Sonoma County Department of Health Services: Environmental Health Division	1030 Center Dr., Suite A Santa Rosa, CA 95403

4. Signature of Local Enforcement Agency Approving Officer:	6. Date of Signature:
5. Please Print or Type Name and Title of Approving Officer: Robert A. Swift, Senior Solid Waste Specialist	1/25/96

7. Date Received by CIWMB: JAN 25 1996

8. Signature of CIWMB Approving Officer: Dorothy Rice	10. Date of Signature:
9. Please Print or Type Name and Title of Approving Officer: Dorothy Rice, Chief Deputy	3-7-96

11. Date of Permit Issuance: 3/21/96	12. Permit Review Due Date: 3/21/2001

The facility for which this permit has been issued shall only be operated in accordance with the description provided in the application pursuant to Section 18105.1 and Report of Composting Site Information pursuant to Section 17863.

16. Terms and Conditions:

a. The operator shall comply with applicable state minimum standards set forth in Title 14, Division 7, Chapter 3.1 (commencing with Section 17850) of the California Code of Regulations.

b. The operator shall comply with all mitigation and monitoring measures developed in accordance with a certified environmental document filed pursuant to Public Resources Code Section 21081.6.

c. The operator shall maintain a copy of this standardized permit at the facility to be available at all times to facility, enforcement agency, or board personnel.

d. The operator shall maintain and make available for inspection by the enforcement agency and board all correspondence and reports provided to other regulatory agencies that have jurisdiction over the facility.

e. The operator shall be responsible for identifying the types of feedstocks accepted for processing.

f. The design capacity of 36,000 cubic-yards of material undergoing the composting process shall not be exceeded. This requirement does not include on-site storage of feedstock or stabilized compost.

g. Additional clarifying information concerning the design and operation of the composting facility shall be furnished upon written request of the enforcement agency, or the board.

h. The operator shall notify the enforcement agency, in writing, within thirty (30) days of receipt of the test results, of any noncompliance with Sections 17868.2 and 17868.3 of Chapter 3.1, Division 7, Title 14, of the California Code of Regulations.

i. Unless specifically permitted or allowed under Title 14, Division 7, Chapter 3.1 of the California Code of Regulations, the facility shall not accept the following materials:

(1) Designated wastes as defined in Title 23, Chapter 15, Section 2522 of the California Code of Regulations

(2) Hot Ashes/Burning materials

(3) Medical wastes as defined in Section 25023.2 of the Health & Safety Code

(4) Hazardous Wastes as defined in Section 25117 of the Health & Safety Code

(5) Liquid Wastes as defined in Title 23, Chapter 15, Section 2601 of the California Code of Regulations (unless approved by RWQCB and the enforcement agency)

j. The following activities are prohibited:

(1) Scavenging

(2) Salvaging

(3) Discharge of wastes off-site

(4) Vector propagation or harborage

k. The facility, if located outside of a city, shall be maintained in compliance with the flammable clearance provisions, pursuant to Public Resources Code Section 44151.

DWARD J. WALKER
CTOR OF PUBLIC WORKS

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS

117A ADMINISTRATION BUILDING
575 ADMINISTRATION DRIVE
SANTA ROSA, CALIFORNIA 95403

AREA CODE [707]
ROADS 527-2231
TRANSIT 585-7516
SANITATION 527-2231
REFUSE 527-2231
FAX 527-2620

September 7, 1993

File: 50-01-17.6 & 50-01-2.9

Wiles Edison
County of Sonoma Public Health Department
1030 Center Drive, Suite A
Santa Rosa, CA 95403

Re: Notification of Startup of Composting

Dear Mr. Edison:

This is to notify you that the first day of composting at the Central Disposal Site will be Monday, September 13, 1993. As indicated in the permit exemption for the composting, our exemption will be valid through March 13, 1995. If you have any questions or require additional information, please contact me at this office.

Very truly yours,

EDWARD J. WALKER
DIRECTOR OF PUBLIC WORKS

Darlene G. Comingore
Civil Engineer

cc: Edward Walker
Ken Wells
John Sciborski
Will Bakx, Sonoma Compost Company

MARK A. KOSTIELNEY
Director of Public Health
GEORGE R. FLORES, M.D.
Health Officer

COUNTY OF SONOMA
PUBLIC HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES

1030 CENTER DRIVE, SUITE A • SANTA ROSA • CALIFORNIA 95403-2067 • TELEPHONE (707) 525-6565

July 22, 1993

Sonoma County Department of Public Works
Refuse Division
575 Administration Drive, Room 117A
Santa Rosa, CA 95403

Attention: Darlene Comingore

The Sonoma County Solid Waste Enforcement Agency grants exemption from the requirements to obtain a Solid Waste Facility Permit, in accordance with the California Code of Regulations, Title 14, Division 7, article 3.1, Section 18215 (b)(6) at a public hearing on July 16th, 1993 for the Sonoma County Central Compost Site.

Exemption is based on the following findings:

a. That the exemption is not against the public interest.

Composting is a commonly recognized method of turning yard waste into a valued soil amendment. Yard waste composting will reduce the amount of material required to be landfilled. As a consequence the life of the landfill will be prolonged, while at the same time a beneficial product, valued for its properties as a soil additive, will be produced. Commercial composting of yard waste is currently practiced in many states, and is being encouraged on a countrywide basis at both the commercial and residential levels. The successful production of compost made from the green waste fraction of the municipal solid waste stream will go a long way towards achieving the reduction goals mandated by the Integrated Waste Management Act of 1989, as described in the Source Reduction and Recycling Elements prepared by the County and cities of Sonoma County.

b. That the quantity of solid waste is insignificant (a determination of significance will depend upon surrounding land uses and other factors. The same quantity of solid wastes may be significant in one

10. Within 120 days prior to the termination of this exemption, which has a 1 1/2 year time line, an application for revision of the Central Disposal Site's permit shall be submitted to the LEA (Local Enforcement Agency). This application will reflect the composting operation within its boundaries. If this application is not received, all active compost material as well as feedstock or additives must be removed or disposed of properly upon expiration of this 1 1/2 year permit exemption.

11. This office must be informed of the first day composting begins. Permit shall expire exactly 1 year and a half from this date.

12. Upon passage of the Draft compost regulations, this site must meet all new requirements prior to the expiration of the exemption or sooner if State law requires.

13. Within 120 days prior to termination of this exemption, provide the LEA a final report summarizing the operation. Include: total amounts composted, TPD peaks and averages, problems met and remedies taken, changes anticipated for future operations, and other information deemed necessary by the LEA.

14. Provide the LEA with monthly reports showing TPD of feedstock delivered to site and TPD of mature compost leaving the facility.

15. Provide to the LEA by August 30, 1993 a copy of the operations plan requested by the North Coast Regional Water Quality Control Board.

16. In the event that compost leachate is shown to be having an adverse effect upon off-site run-off, the necessary abatement procedures outlined within the RCSI must be implemented.

cc: Richard Azavedo, North Coast Reg. Water Qual. Control Board
California Integrated Waste Management Board

)PERATING PERMIT FOR FACILITIES
RECEIVING SOLID WASTE HAZARDOUS MATERIALS

TYPE OF FACILITY	FACILITY/PERMIT NUMBER
Landfill	49-AA-0001

NAME AND STREET ADDRESS OF FACILITY	NAME AND MAILING ADDRESS OF OPERATOR
Central Disposal Site 500 Mecham Road Petaluma, CA	County of Sonoma Department of Public Works 575 Administration Drive, Rm. 117A Santa Rosa, CA 95403

PERMITTING ENFORCEMENT AGENCY	CITY/COUNTY
Sonoma County Health Department	Sonoma County

PERMIT

This permit is granted solely to the operator named above, and is not transferrable.

Upon a change of operator, this permit is subject to revocation.

Upon a significant change in design or operation from that described by the Plan of Operation or the Report of Station or Disposal Site Information, this permit is subject to revocation, suspension, or modification.

This permit does not authorize the operation of any facility contrary to the State Minimum Standards for Solid Waste Handling and Disposal.

This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other government agencies.

The attached permit findings, conditions, prohibitions, and requirements are by this reference incorporated herein and made a part of this permit.

APPROVED:

Jack Vrmeer
APPROVING OFFICER

Jack VrMeer, Solid Waste Specialist
NAME/TITLE

AGENCY ADDRESS

1030 Center Drive, Suite A
Santa Rosa, CA 95403-2067

SEAL

AGENCY USE/COMMENTS

PERMIT RECEIVED BY CWMB	CWMB CONCURRANCE DATE
JAN 31 1991	FEB 22 1991
PERMIT REVIEW DUE DATE	**PERMIT ISSUED DATE**
3-19-96	3-19-91

CWMB (Rev. 7/84)

Permit for the Central Disposal Site
Facility File No. 49-AA-0001
January 9, 1991

I. Findings:

This facility is an existing (since 1971) 389 acre Class III sanitary landfill using the cut and fill in a canyon method of operation. This facility receives 1,461 TPD on the average, with peak loading of 1,940 TPD(2,345 TPD highest recorded peak load) of primarily non-hazardous and inert solid wastes and is operated from 7:00 a.m. to 4:00 p.m., seven days a week.

A. The owner of the facility is the county of Sonoma and the operator is the Sonoma county Department of Public Works.

B. The facility is located about 2.8 miles southwest of the City of Cotati, at 500 Mecham Rd., Petaluma, in Sections 4 & 9, T5N, R8W, MDB&M. AP# 024-080-19.

C. The facility has stationary buildings that consist of an office, two gatehouses with a scale, a recycling area complete with a housing structure for used oil and automobile batteries, and a pad for recyclable material containers. The facility has an estimated total design capacity of about 19,779,250 cubic yards (10.5 million tons, a conversion factor supplied by the DPW taking into account the different compaction rates of 1,000 lbs./cu.yd. in the first 20 years life of the site and 1,200 lbs./cu.yd. in the remaining 10 years since the acquisition of the Caron Compactor). The facility has an estimated remaining capacity of 9,093,950 cubic yards (about 5.5 million tons, as of May 31, 1990). For full discussions of facility design capacity that take into account volume of material to be used for daily and final covers, read pages 16-17 of RDSI, dated May 1990.

D. Types of wastes received at this facility include all non-hazardous wastes which consists of:
   a) Household and commercial wastes.
   b) Agricultural and demolition wastes.
   c) Sludge from wastewater treatment plants (as per Title 23, Subchapter 15, Section 2523[c]).

   The permitted daily capacity for item (c) shall be 20% of quantity of waste received on a given operating day.

E. The facility currently receives 1,461 TPD on the average with peak loads of 1,940 TPD. The approximately 120 acres slated for landfilling of the permitted total of 389 acres that comprise the facility is estimated to have design capacity of about 19,779,250 cubic yards (11.9 million tons). The facility as 10,685,300 cubic yards (about 6.4 million tons) of refuse in place as of May 31, 1990. However, DPW calculations have estimated that this figure of refuse in place is closer to 5.3 million tons because compaction effort at the site in years prior to the acquisition of the Caron Compactor was about 1,000 lbs./cu.yd instead of the current 1,200 lbs./cu. yd.

F. The current method of operation is for users (individual citizens and commercial operators) to drive into the facility, pay fees at the gatehouses and drive up to designated commercial and non-commercial tipping platforms to dispose of refuse onto lower pit areas. Waste is then pushed to work face area for compaction and daily cover. Recyclables are dropped off at recycle area prior to gatehouses.

G. Resource recovery or salvaging (recycling) is conducted at this facility. Recycled items include newspapers, cardboard, glass, mattresses, various types of scrap metals, whitegoods, tires, used oils, paints, and automobile lead acid batteries. The used oil, auto batteries, and paint exchanges are conducted with applicable CCR, Title 22, permits and/or exemptions from the DOHS.

Hazardous wastes, such as waste oils, batteries, paints, etc., shall be handled in a manner approved by the LEA and the CIWMB.

H. Hazardous waste exclusion (screening) program at the facility is as described in the HHW Exclusion Program, Second Draft (RDSI, May 1990). the exclusion program may be modified to reflect comments received from various responsible agencies during development of the program.

The program consists of activities of random inspections of incoming loads; regular visual inspection of deposited wastes; training of personnel in recognition and proper handling of hazardous waste; proper reporting of unlawful disposal incidents (unlawful disposal incidents will be reported to the County Sheriff (707)527-2213, and reports also filed with County fire Services, Haz Mat division (707) 527-1151; and, installation of signs at the facility's entry way indicating that no hazardous wastes are accepted and a listing of unacceptable wastes (in-place). (A.S. -DPW).

The hazardous wastes screen and exclusion program also includes installations of signs at facility entry way indicating that no hazardous wastes are accepted at this facility and a listing of unacceptable wastes.

All HHW collection events and exclusion programs at the site shall be conducted with appropriate permits and/or exemptions from the DOHS.

Additional exclusion measures may be required upon the request of the LEA or the Board.

I. There may be significant changes in design and/or operation in the next five years to facilitate operations and projects of wood chipping, Christmas tree recycling, composting and bioremediation of contaminated soils at the non-hazardous levels.

J. The facility operates seven days per week from 7:00 a.m. to 4:00 p.m., except for designated holidays. The remaining site life is given as approximately nine years and four months. Closure date is given as approximately April 30, 1999 (RDSI, May 1990).

2. The following agencies and documents condition this permit and the operation and use of the facility:

A. Report of Disposal Site Information, dated May 31, 1990.

B. Sonoma County Planning Department, Conditional Use Permit, N.2426.

C. California Regional Water Quality Control Board, North Coast Region, Revised Waste Discharge Requirement, Order No. 89-8, adopted on February 22, 1989.

D. Bay Area Air Quality Management District, Permit No. 31686.

E. Department of Public Works, Lead Agency, in preparation of Negative Declaration, Clearinghouse #90030320.

F. Sonoma County Code, Chapter 22, all applicable sections.

G. The Schedule for Implementation of Landfill Control Measures dated january, 1991, Sonoma County Public Works Department.

3. As per the requirements of GC.66796.32: the following findings are made

   A. The permit is consistent with the latest County solid Waste Management Plan as determined by the Sonoma County Department of Public Works, the COSWMP liaison.

   B. This permit is consistent with the standards adopted by the California Integrated Waste Management Board.

4. The facility design and operation are currently in compliance with State Minimum Standards for Solid Waste handling and Disposal as determined by inspection made on January 10, 1991 by Board Staff.

5. The local fire protection district has determined that the facility is in compliance with the Public Resources Code, Sections 4373 (clearance is required from the perimeter of exposed flammable solid waste).

6. The Sonoma County Planning Department has made a finding that the surrounding land use is compatible with the facility operation. Land within 1,000 feet is zoned agricultural. The facility is consistent with the latest version of the County General Plan.

7. Environmental determination (i.e. Notice of Determination) was filed with Office of Planning and Research and with the sonoma County Clerk's Office by the sonoma County Department of Public Works on June 26, 1990 (SCH#:90030320).

II <u>Conditions</u>:

   A. <u>Requirements</u>:

      1. This facility must comply with the State Minimum Standards for solid Waste Handling and Disposal.

      2. This facility must comply with all federal, state and local requirements and enactments.

      3. Additional information concerning the design and operation of this facility must be furnished upon request of the enforcement agency.

      4. At the discretion of the enforcement agency, landfill gas monitoring probes shall be installed for detection of gas migration. (Gas collection and control systems with flaring apparatus have been installed and are operational at this facility.)

         (a) A landfill gas perimeter probe shall be installed, per agreement with IWBM staff, 11-15-90, prior to 7-1-91.

   B. <u>Prohibitions</u>:

      The following actions are prohibited at this facility:

      1. Scavenging

      2. Burning of garbage

      3. Disposal of hazardous wastes

      4. Disposal of sludges and wastes with less than 15% solids

      5. Disposal of grease trap and car wash trap sediments after March 1, 1991

      6. Standing water on covered fill areas

7. Storing full debris boxes of materials to be recycled

8. Storing equipment or materials not used in daily operation of the facility.

C. Specifications:

1. This permit supersedes the existing permit, dated 7/15/86.

2. No significant change in design or operation from that described in the FINDINGS section is allowed, except for those changes which are required under the CONDITIONS portion of this permit. Any significant change which may be proposed for the facility shall require submission of a revised RDSI or an addendum thereto and application for a permit revision to the LEA.

3. This facility has a permitted peak loading capacity of 2,500 tons per operating day and shall not receive more than this design capacity unless it first obtains a revision of this permit.

   Special circumstances and special wastes which would on occasion raise the permitted peak daily tonnage shall include:

   (a) Mechanical breakdowns at one of the transfer stations which feed the Central Disposal Site could result in that days entire waste throughput being hauled to the Central Disposal Site the following day. In this event, the maximum permitted peak daily loading of a single transfer station for a single day following said breakdown. This specification shall not serve to waive standby equipment requirements for feeder transfer stations.

   (b) Emergency Provision

   * Definition of "Emergency"

     1. As defined in 14 CCR 17909.

     2. Any state of emergency declared by the President, Governor, Board of Supervisors, City Council, Health Officer, or other authorized person(s).

   * Notification

     1. By operator: The operator shall notify the LEA as soon as possible, of the nature of the emergency and the actual or desired response to the emergency.

     2. By the LEA: The LEA shall notify the operator as soon as possible, of the existence of an emergency and the desired response to the emergency.

   * Emergency Response

     1. The LEA may waive any or all provisions of the Solid Waste Facilities Permit in order to deal with the emergency.

     2. If the emergency exceeds fifteen(15) days, the LEA shall notify the California Integrated Waste Management Board (CIWMB) of the nature of the emergency and actions taken by the operator and the LEA in response to that emergency by the operator, and notification of, and response by, appropriate regulatory agencies, including the LEA.

3. The operator shall file a written report with the LEA no later than ninety (90) days after the emergency conditions have abated, or at time(s) otherwise specified by the LEA, describing the nature of the emergency, actions taken in response to that emergency by the operator, and notification of, and response by, appropriate regulatory agencies, including the LEA.

(c) A change in facility operator will require a new permit.

D. Provisions:

1. At recycling areas, the method of operation shall be one where received recyclable materials are directly placed in containers and the containers are removed off-site when full.

2. All elements of HHW and exclusion programs shall be operated in strict adherence to the requirements of the CCR, Title 22 and DOHS guidelines.

3. This permit is subject to review by the enforcement agency, and may be suspended, revoked, or modified at any time for sufficient cause.

E. Closure/Postclosure Maintenance:

As per GC 66796.22:

1. The owner/operator of this facility, the sonoma County Department of Public Works has submitted closure/postclosure maintenance financial assurance mechanism certifications to the LEA and to the Board. Enterprise Fund for closure (Anniversary date, January 30), Pledge of Revenue for postclosure. Cost estimates shall be adjusted for inflation yearly.

2. Preliminary plans for closure and postclosure maintenance of the facility are due upon next application for permit review.

F. Self-Monitoring:

The following items shall be monitored by the operator of this facility or his agent. Records including, but not limited to these items, shall be kept and made available to the enforcement agency and the Board upon request:

1. Daily volume of wastes in cubic yards and weight in tons.

2. A log of special occurrences, i.e., fires, explosions, accidents, hazardous wastes, etc., shall be maintained.

3. Logs of equipment down times shall be maintained.

4. Results of the hazardous waste screening programs shall be reported to the LEA on a quarterly basis broken down by months.

MARK A. KOSTIELNEY
Director of Public Health
GEORGE R. FLORES, M.D.
Health Officer

COUNTY OF SONOMA
PUBLIC HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES

1030 CENTER DRIVE, SUITE A • SANTA ROSA • CALIFORNIA 95403-2067 • TELEPHONE (707) 525-6565

Levi L.G.
JOHN JS
ALEX
cc: Ed Harris

March 22, 1991

Levi Gurule, Deputy Director
Department of Public Works
575 Administration Drive, Room 117A
Santa Rosa, CA. 95403

Enclosed please find the solid waste facilities permit for the Central Disposal Site issued March 19, 1991, a resolution of concurrance and covering letter from the CIWMB.

Yours truly,

JACK VRMEER, R.E.H.S., M.P.A.
Solid Waste Specialist

JV/mb

RECEIVED
PM MAR 26 4 10: 08
SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

STATE OF CALIFORNIA

Pete Wilson, Governor

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD
1020 Ninth Street, Suite 300
Sacramento, California 95814

RECEIVED
MAR 8 1991
HAZARDOUS MATERIALS

MAR 5 1991

Jeff D. Lewin, R.E.H.S., M.P.H.
Supervising Environmental Health Specialist
Sonoma County Environmental Health Services
1030 Center Drive, Suite A
Santa Rosa, CA 95403-2067

Dear Mr. Lewin:

The California Integrated Waste Management Board has concurred in the issuance of Solid Waste Facilities Permit No. **49-AA-0001** for Central Disposal Site.

Enclosed is a copy of Permit Decision No. 91-01, adopted February 22 - 23, 1991, and the permit. Please submit a copy of the permit to the Board's Permitting Branch, to the attention of Martha Vazquez, when it is issued.

Sincerely,

Michael R. Frost
Chairman

GHL:MV:mea
lewin.con

Enclosures

RECEIVED
MAR 8 1991
HAZARDOUS MATERIALS

California Integrated Waste Management Board

Permit Decision No. 91-01
February 22 -23, 1991

WHEREAS, the County of Sonoma, acting as Local Enforcement Agency, has submitted to the Board for its review and concurrence in or objection to a Solid Waste Facilities Permit for the Central Disposal Site; and

WHEREAS, Board staff has evaluated the proposed permit for consistency with standards adopted by the Board; and

WHEREAS, the Board finds that all State and local requirements for this proposed permit have been met, including compliance with the California Environmental Quality Act, conformance with the County Solid Waste Management Plan, and requirements for closure and postclosure maintenance.

NOW THEREFORE, BE IT RESOLVED, that the California Integrated Waste Management Board concurs in the issuance of Solid Waste Facilities Permit No. 49-AA-0001.

CERTIFICATION

The undersigned Chairman of the California Integrated Waste Management Board does hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted at a meeting of the California Integrated Waste Management Board held February 22 - 23, 1991.

Dated: FEB 22 1991

Michael R. Frost
Chairman

OPERATING PERMIT FOR FACILITIES RECEIVING SOLID WASTE

TYPE OF FACILITY	FACILITY/PERMIT NUMBER
LANDFILL	49-AA-001

NAME AND STREET ADDRESS OF FACILITY	NAME AND MAILING ADDRESS OF OPERATOR
CENTRAL DISPOSAL SITE 600 MECHAM RD. COTATI, CA	COUNTY OF SONOMA DEPARTMENT OF PUBLIC WORKS 575 ADMINISTRATION DRIVE SANTA ROSA, CA 95401

PERMITTING ENFORCEMENT AGENCY	CITY/COUNTY
SONOMA COUNTY HEALTH DEPARTMENT	SONOMA COUNTY

PERMIT

This permit is granted solely to the operator named above, and is not transferrable.

Upon a change of operator, this permit is subject to revocation.

Upon a significant change in design or operation from that described by the Plan of Operation or the Report of Station or Disposal Site Information, this permit is subject to revocation, suspension, or modification.

This permit does not authorize the operation of any facility contrary to the State Minimum Standards for Solid Waste Handling and Disposal.

This permit cannot be considered as permission to violate existing laws, ordinances, regulations, or statutes of other government agencies.

The attached permit findings, conditions, prohibitions, and requirements are by this reference incorporated herein and made a part of this permit.

APPROVED:

APPROVING OFFICER

JACK VrMEER, SOLID WASTE SPECIALIST

NAME/TITLE

AGENCY ADDRESS

3313 CHANATE ROAD
SANTA ROSA, CA 95404

AGENCY USE/COMMENTS

Permit submitted to CWMB, 2-5-86. No CWMB concurrance or objection in writing. Permit issued pursuant to 7.3 CGC66796.32(d).

SEAL

PERMIT RECEIVED BY CWMB	CWMB CONCURRANCE DATE

PERMIT REVIEW DUE DATE	PERMIT ISSUED DATE
	7-15-86

B (Rev. 7/84)

FINDINGS:

A. This facility is an existing (since 1971) 389 acre Class II-2 sanitary landfill utilizing the cut and fill method of operation. The disposal site is located approximately 2.8 miles southwest of Cotati on the westside of Meaham Road.

Remaining site life is estimated to be 10 years. This facility receives 725 tons per day of Group 2 & 3 wastes and is operated from 7:00 a.m. to 7:00 p.m., seven days a week. Salvage operations are conducted for newspaper, cardboard, glass, aluminium aluminum and iron.

Types of waste received at the site include:

1. Household and commercial waste.
2. Agriculture and demolition waste.

Design and operation of the facility are as specified by the Reports of Disposal Site Information dated May 1979 and February 1984. There may be significant changes in design or operation in the next five years. Projected closure of the Healdsburg Disposal Site during 1987 will increase the volume of refuse received by 180 tons per day.

B. The following documents condition operation of this facility:

1. California Regional Water Quality Control Board, North Coast Region: Waste Discharge Requirements No. 74-11.
2. Report of Disposal Site Information, May 1984.

C. This facility's design and operation are currently in compliance with State Minimum Standards for Solid Waste Handling and Disposal.

D. This permit is consistent with the Sonoma County Solid Waste Management Plan.

E. The Sonoma County Planning Department has made a finding that the surrounding land uses is compatible with the facility. Land within 1000 feet is zoned agricultural.

F. Sonoma County has found that this facility is consistent with the latest version of its General plan.

G. The local fire protection district has determined that the facility is in compliance with the Public Resources Code sections 4373 and 4374 (clearance required from the perimeter of exposed flammable solid waste).

II. CONDITIONS:

A. Requirements:

1. This facility must comply with the State Minimum Standards for Solid Waste Handling and Disposal.

2. This facility must comply with all federal, state, and local requirements and enactments.

3. Additional information concerning the design and operation of this facility must be furnished upon request of the enforcement agency.

4. The registered civil engineers report reviewing the site design, implementation, and operation plan submitted as required by section 17751, Title 14 is made a part of this permit.

B. Prohibitions:

The following actions are prohibited at the facility:

1. Scavenging
2. Burning of garbage
3. Disposal of hazardous wastes or group 1 wastes
4. Disposal of sludges and wastes with less than 15% solids.

c. Specifications:

1. No significant change in design or operation from that described in Items A and B of the FINDINGS section is allowed, except for those changes which are required under the CONDITIONS portion of this permit. Any significant change which may be proposed for the facility shall require submission of a revised Report of Information and new application for a solid waste facility permit to the local enforcement agency and the Board for review.

2. This facility has a permitted daily capacity of 1470 tons per operating day and shall not receive more than 1760 tons per day unless it first obtains a modification to this permit. The remaining capacity of the landfill is 2,766,500 tons.

D. Provisions:

1. This permit is subject to review by the enforcement agency, and may be suspended, revoked, or modified at any time for sifficient sufficient cause.

E. Monitoring Program:

The following items shall be monitored by the operator of this facility or his agent. Records including but not limited to these items shall be kept and made available to the enforcement agency upon request:

1. Daily volume of wastes in cubic yards, and weight in tons.

2. Copies of correspondence with consultants or agencies regarding the design and/or operation of the disposal site.

3. At the discretion of the Local Enforcement Agency landfill gas probes shall be installed for detection of migration. If needed, a landfill gas control system shall be installed.

ROBERT L. HOLTZER, M.D.
PUBLIC HEALTH OFFICER

SONOMA COUNTY
PUBLIC HEALTH DEPARTMENT

3313 CHANATE ROAD
SANTA ROSA, CALIFORNIA 95404
PHONE: 527-2605

February 5, 1986

California Waste Management Board
1020 Ninth Street, Suite #300
Sacramento, CA 95814

Attn: Ms. Lee Gannon

The Sonoma County Local Enforcement Agency has reviewed the data submitted for the Central Disposal Site (49-AA-001) five year permit review. The LEA has made numerous inspections of the facility to observe continuing design and operation.

The design of the facility has not significantly changed since issuance of the original permit in 1979.

The method of operation has significantly changed since issuance of the original permit in 1979. There has been a substantial upgrading in equipment and personnel in both quality and numbers. Refuse is "put away" with increased efficiency and greater compliance with the "Minimum Standards."

Daily tonnage of refuse received has increased 223% from 325 cubic yards per day to 725 yards per day. The increase is due to early low estimates and refuse received from two transfer stations replacing closed disposal sites. The site has conformed to the terms and conditions of the permit with the exception of quantities received. The five year permit revision has been drafted to reflect the increase received.

The Environmental Impact Report (January 1985) for the Sonoma County Solid Waste Management Plan, (November 1985) states that there will be no significant impact and/or significant effect on the environment due to the increased refuse received at the Healdsburg Disposal Site.

The Sonoma County Local Enforcement Agency concurs with the above E.I.R. and has made a determination that there is no significant change in design or operation of the Central Disposal Site.

If there are any questions, please call the undersigned at 527-2714 between the hours of 8:00 and 9:00 a.m., Monday through Friday.

Very truly yours,

JACK H. VRMEER, R.S., M.P.A.
Solid Waste Specialist

JHV/pmr

cc: Ed Haskins
Sonoma Count Works

MARK A. KOSTIELNEY
Director of Public Health
GEORGE R. FLORES, M.D.
Health Officer

COUNTY OF SONOMA
PUBLIC HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES

1030 CENTER DRIVE, SUITE A • SANTA ROSA • CALIFORNIA 95403-2067 • TELEPHONE (707) 525-6565

RECYCLE / FILE 56-01-17.5 & 17.6			
ROUTE TO:	INITIAL	DATE	RESPOND
Walter			
Wells			
Sikorski	JS	5/17	
Comingore	DR	5/17	

May 12, 1993

Darlene Comingore
Department of Public Works
Refuse Section
575 Administration Drive, Room 117A
Santa Rosa, CA. 95403

Re: Permitting Central Landfill's Compost Site, SWIS #49-AA-0260

Dear Ms. Comingore:

During the meeting of May 11 you requested information pertaining to permitting Central Landfill's proposed composting operations. It has been determined by the Permits Branch of the CIWMB that composting operations taking place on intermediate cover of a landfill cannot be issued a separate Solid Waste Facilities Permit (SWFP). The composting operation, if permanent, must instead be incorporated into a revision of the landfill's permit. If the composing were to take place on native soil or a closed/capped landfill a separate SWFP would be required.

Public Works has some choices to make. First they must rescind their application for a SWFP, in writing to this department, stating the reason for rescinding. Included in this transmission must be direction as to where they plan to go from here. Do they wish to ammend the application to reflect application for a revision of Central's permit? Do they wish not to apply at all? Do they wish to apply for an exemption from a SWFP, as allowed under CCR Title 14, Section 18215b(6), as a demonstration project?

To change to a revision of Central's permit would require starting the 120 day permit time line over. If application for an exemption were pursued, this office could probably process the application, and grant an exemption within 1 month. This exemption would be valid for 1 year from the date of granting.

Once the exemption is granted, this new operation must be included as an ammendment to Central Landfill's application for a permit modification. This will either require waiving the time line for Central's permit modification process or necessitate applying for a new permit modification, along with the required permit application fees.

ALEX SEBASTIAN

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 2254 Page: 1 Expires: JUN 1, 1995

This document does not permit the holder to violate any District regulation or other law.

Sonoma County Department of Public Works
575 Administration Dr, Room 117A
Santa Rosa, CA 95403

Location: 500 Meacham Road
Petaluma, CA 94952

S#	DESCRIPTION	[Schedule]	PAID
1	CHEM> Landfill with gas collection system, Landfill Sonoma County Central Landfill	[K]	605
[illegible]	Industrial Flare - Other (not refinery), 52MM BTU/hr max Landfill Gas Flare	[F]	91
4	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas I.C. ENGINE-GENERATOR SET	[B, 324 days]	101
5	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas I.C. ENGINE-GENERATOR SET	[B, 324 days]	101
6	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas I.C. ENGINE-GENERATOR SET	[B, 324 days]	101
7	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas I.C. ENGINE-GENERATOR SET	[B, 324 days]	101
8	CHEM> Landfill without gas collection system, 278 tons/hr max Waste Material Handling Operation Abated by: A8 Unclassified Abatement Device	[F, 351 days]	80

7 Permit Sources, 0 Exempt Sources
Total Fees $1705.00
Invoice #26856 Paid

*** See attached Permit Conditions ***

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

Source# 1	subject	to	condition	ID# 4044
Source# 2	subject	to	condition	ID# 1602
Source# 4	subject	to	condition	ID# 6117
Source# 5	"	"	"	ID# 6117
Source# 6	"	"	"	ID# 6117
Source# 7	"	"	"	ID# 6117
Source# 8	subject	to	condition	ID# 9670

*** PERMIT CONDITIONS ***

CONDITION ID #4044

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

CONDITION ID #1602

1. A temperature monitor with readout display and continuous recorder (recording thermocouple) shall be installed and maintained. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion temperature at all times. Temperature charts shall be retained for at least one year and made available at all times for District inspection.
2. The combustion temperature of the flare shall be maintained at a minimum of 1400oF and a residence time of at least 0.3 seconds. These operating conditions are subject to adjustment if source test data demonstrates significant NOx or CO reduction at a different

*** PERMIT CONDITIONS ***

temperature and/or residence time.

3. Under no circumstances shall raw landfill gas be vented to the atmosphere.
4. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.
5. A flow meter to measure gas flow into the flare shall be installed and maintained.
6. The flare shall be equipped with both local and remote alarm systems.
7. If source test data indicates that CO emissions from the flare exceed 550 lb/day, the applicant shall provide modeling as required by Regulation 2-2-306.

CONDITION ID #6117

S-4 through S-7

1. Under no circumstances shall raw landfill gas be vented to the atmosphere .
2. The flare shall be operated only when one or more engines are down. An automatically controlled landfill gas valve shall be installed and maintained to insure that landfill gas is immediately made available for flaring to the flare, S-2, when one or more engines are down.
3. The engines S-4 through S-7 shall be fired exclusively on landfill gas.
4. The operation of the engines S-4 through S-7 is limited to a total combined 36,161,100 hp-hr per consecutive 365 day period.
5. District approved flowmeters, to measure landfill gas flow into the engine, shall be installed prior to any

*** PERMIT CONDITIONS ***

operation and maintained in good working condition.

6. NOX emissions, calculated as NO2, from S-4 through S-7 shall not exceed 1.0 gram/hp-hr.
7. CO emissions from S-4 through S-7 shall not exceed 2.1 grams/ hp-hr.
8. POC emissions from S-4 through S-7 shall not exceed 0.563 gram/hp-hr.
9. A source test shall be performed on any one of the engines S-4 through S-7 within 60 days of start-up to demonstrate compliance with conditions 6, 7, and 8. Such source test shall be performed annually thereafter. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures. They shall be notified at least 10 days in advance of each source test. The source test report shall be submitted to the Source Test Section for their approval, with a copy being sent to the Permit Services Division within 30 days of the test date.
10. A characterization of the landfill gas shall be performed concurrently with each source test. The landfill gas sample shall be drawn from the main landfill gas header. The landfill gas characterization shall be performed in accordance with current California Air Resources Board testing guidelines for Calderon specified air contaminants, total chlorinated compounds, methane, POC, CO2, O2, and N2. The results of this characterization shall be submitted to the District within 60 days of start-up. Thereafter, a landfill characterization for the Calderon specified air contaminants shall be performed annually and the data shall be submitted to the District within 30 days of the testing.
11. Any landfill gas characterization from the engine header which indicate the presence of toxic compounds in excess of the following unabated concentrations and presence of any other toxic compounds not listed below shall require the permit holder to submit to the District for review a risk analysis. The risk analysis shall be submitted to

*** PERMIT CONDITIONS ***

the District within 30 days of the results of the characterization and be referenced to this application number. Unabated concentrations:

Benzene = 0.8 ppmv
Trichloroethylene = 1.2 ppmv
Perchloroethylene = 2 ppmv

12. Daily records shall be maintained, in a District approved logbook, for the hours of operation & hp-hr of each of the engines, and landfill gas amount flowed through the engines. The logbook shall be kept on site and shall be made available to the District staff upon request.
13. The facility-wide NOX emissions (calculated as NO2) are limited to 39.82 tons per year (tpy). Any relaxation of this condition (i.e.> 40 tpy of NOX) will trigger Prevention of Significant Deterioration modeling for NOX in accordance with District Regulation 2-2-304.2.

CONDITION ID #9670

S-8:

1. The landfill shall receive municipal waste in quantities not to exceed the following limits:

   a. 2500 tons per day;
   b. 500,000 tons per consecutive 365 day period.

   Quantities of waste received shall be entered in a District approved log on a daily basis, and totalled to demonstrate compliance with the permit condition. These records shall be kept at the site for at least 24 months from the date the data is entered, and shall be made available to the District staff for inspection.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

2. Particulate emissions from any operation of the landfill operations shall be abated by water spray A-8, if necessary, so that visible dust emissions shall not exceed Ringelmann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.

3. If the plant receives two or more Violation Notices from the District for "Public Nuisance" in any consecutive 12 month period, the owner/operator of this plant shall submit to the District within 30 days, an application to modify the Permit to Operate to include the following control measures as applicable or any order that the District deem necessary and appropriate.

   a. The paving of all roads associated with landfill operations.
   b. The use of chemical suppressant to control fugitive dust emissions from roadways associated with this landfill.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ END OF CONDITIONS ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

** SOURCE EMISSIONS **

PLANT # 2254
May 11, 1994

#	Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	
	Sonoma County Central Landfill	-	413	-	-	-
	Landfill Gas Flare	-	-	20	1	5
	I.C. ENGINE-GENERATOR SET	4	26	54	4	113
	I.C. ENGINE-GENERATOR SET	4	26	54	4	113
	I.C. ENGINE-GENERATOR SET	4	26	54	4	113
	I.C. ENGINE-GENERATOR SET	4	26	54	4	113
	Waste Material Handling Operation	807	-	-	-	-
	T O T A L S	823	517	236	17	457

** PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT **

Pollutant Name	Emissions lbs/day
Benzene	1.29
Perchloroethylene (PERC)	7.94
Trichloroethylene	2.29
Vinylidene chloride	.53
Chloroform	.10
Methylene chloride	15.72
Vinyl chloride	2.08

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
550 SKYLANE BLVD. SUITE A
SANTA ROSA, CA 95403
PHONE: (707) 576-2220

REC'D SEP 30 1993

September 29, 1993

TO ALL OWNERS/OPERATORS OF MUNICIPAL SOLID WASTE LANDFILLS AND INTERESTED PARTIES

Subject: Adoption of Order No 96-83, General Discharge Requirements Implementing Provisions of the Federal Landfill Regulations (Subtitle D)

On September 22, 1993, the Regional Water Board adopted Order No. 93-83 revising the waste discharge requirements for all municipal solid waste landfills in the North Coast Region.

The Order, as adopted, contains two revisions from the draft Order sent to you in early September. The enclosed attachment presents the two changes to the Order. Finding No. 9, added to the Order, will allow the Regional Board's Executive Officer to modify compliance dates in the event the Environmental Protection Agency alters the implementation dates for small landfills. If EPA alters its implementation dates, my staff will notify you of the changes and revised compliance dates.

For your convenience, the enclosed attachments summarize the actions that landfills must perform under the revised Order. All landfills should identify and establish concentration limits for all Appendix II, 40 CFR part 258 compounds. For Appendix II compounds not currently contained in your existing waste discharge requirements, background monitoring wells should be sampled immediately. A minimum of 4 samples taken over the next year are needed to establish concentration limits for the compounds.

Please review Order No. 93-83 thoroughly. If you have any questions, please contact Richard Azevedo of my staff at (707) 576-2679.

Sincerely,

Benjamin D. Kor
Executive Officer

RGA:tab/newnotice

Certified-Return Receipt Requested

Enclosures

State of California
Regional Water Quality Control Board
North Coast Region

Richard Azevedo
September 27, 1993

AMMENDMENT
EXECUTIVE OFFICER'S SUMMARY REPORT
9:00 a.m., September 22, 1993
Siskiyou County Historical Society
910 South Main Street
Yreka, California

ITEM NO. 7

SUBJECT: Amendment to Order No. 93-83, General Waste Discharge Requirements for Municipal Solid Waste Landfills.

1. Page 4, Section 3(d) should read:

Existing Footprint	The areal projection of land covered by waste...

2. Finding 9 should be added to Order No. 93-83.

The USEPA has announced its intention to set back several of the revised compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

PRELIMINARY STAFF RECOMMENDATION: Adopt Order No. 93-83 as modified.

(item7waste)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

ORDER NO. 93-83

GENERAL WASTE DISCHARGE REQUIREMENTS

AMENDING WASTE DISCHARGE REQUIREMENTS

FOR

MUNICIPAL SOLID WASTE LANDFILLS

AND

IMPLEMENTING PROVISIONS OF FEDERAL
MUNICIPAL SOLID WASTE LANDFILL REGULATIONS

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, authorized development of nationwide standards for disposal of municipal solid waste.

2. On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations, 40 CFR Parts 257 and Part 258, that apply to dischargers who own or operate landfills receiving municipal solid waste. The federal regulations require each state to implement the federal regulations or an equivalent program. States with approved programs may approve engineered alternatives to certain prescriptive standards contained in the federal regulations.

3. On June 17, 1993, the State Water Resources Control Board adopted Resolution No. 93-62, entitled Policy for Regulation of Discharges of Municipal Solid Waste (Policy), as State Policy for Water Quality Control under authority of Section 13140 of the California Water Code. The Policy directs each Regional Water Quality Control Board to revise the waste discharge requirements of each municipal solid waste landfill to comply with 40 CFR Parts 257 and Parts 258.

4. On June 29, 1993, the U.S. Environmental Protection Agency tentatively approved California's modified solid waste landfill regulations.

5. The Regional Water Board proposes to comply with State Water Resources Control Board Resolution No. 93-62 through the adoption of a single order amending the waste discharge requirements of municipal solid waste landfills within the North Coast Region.

6. Adoption of the general amendment is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), Division 13, commencing with Section 21000 of the Public Resources Code because it is an action by a regulatory agency for the protection of natural resources, within the meaning of Section 15307 of the Guidelines for Implementation of California Environmental Quality Act in Title 14 of the California Code of Regulations.

7. The Board has notified the dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations.

8. The Regional Water Board, in a public hearing, heard and considered all comments pertaining to adoption of this order.

9. The USEPA has announced its intention to set back several of the compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

THEREFORE, IT IS HEREBY ORDERED that Order No. 93-83 amends the waste discharge requirements of the dischargers listed in Section 1. Each discharger shall comply with the provisions of this Order in addition to provisions of existing waste discharge requirements, provided that provisions of this Order supercede any conflicting provision in the waste discharge requirements.

SECTION 1
General Applicability

(a) This Order is applicable to all existing and lateral expansions at municipal solid waste (MSW) landfills. All MSW landfills shall implement the provisions of Chapter 15, Division 3, Title 23, California Code of Regulations (CCR) and Federal regulations in 40 CFR Part 257 and 258.

(b) This Order applies only to MSW landfills that receive waste after October 9, 1991.

(c) MSW landfills receiving waste after October 9, 1991 that halt waste acceptance before October 9, 1993 are exempt from this Order with the exception of the final cover requirements presented in 40 CFR 258.60(a) provided that final cover, meeting the requirements of Article 8, Chapter 15 and 40 CFR 258.60(a), is installed within six months of the last receipt of waste.

(d) Landfills meeting the requirements of Sections 1(b) and 1(c) above are subject to all requirements of Chapter 15, Division 3, Title 23, CCR.

(e) Dischargers shall achieve compliance with the groundwater monitoring and corrective action portions of Chapter 15 and 40 CFR Part 258 in accordance with the schedule presented in Section 10 of this Order.

(f) The discharger shall submit financial assurance documents for closure, post closure and corrective action by April 9, 1994.

(g) This Order amends the waste discharge requirements for the following dischargers.

Landfill	Discharger	Order No.
Willits Solid Waste Disposal Site Class III Waste Management Unit	City of Willits and County of Mendocino	92-107
Laytonville Solid Waste Disposal Site	County of Mendocino	75-50
Caspar Solid Waste Disposal Site	County of Mendocino and City of Fort Bragg	78-125

Cummings Road Solid Waste Disposal Site	City Garbage Company of Eureka, Inc.	93-46
South Coast Solid Waste Disposal Site	County of Mendocino	77-23
Weaverville Solid Waste Disposal Site	County of Trinity	80-193
City of Ukiah Class II-2 Solid Waste Disposal Site	City of Ukiah	75-43
Happy Camp Landfill	County of Siskiyou	77-10
Lava Beds National Monument Solid Waste Disposal Site	U.S. Department of the Interior, National Park Service	79-76
Tennant Solid Waste Disposal Site	County of Siskiyou	80-46
Hotelling Gulch Solid Waste Disposal Site	County of Siskiyou	82-103
Rogers Creek Solid Waste Disposal Site	County of Siskiyou	82-121
Sheepy Ridge Solid Waste Disposal Site, Class III Waste Management Unit	City of Tulelake	89-74
City of Weed Solid Waste Disposal Site, Class III Waste Management Unit	City of Weed	89-70
City of Yreka Solid Waste Disposal Site, Class III Waste Management Unit	City of Yreka	89-68
Class II-2 Annapolis Solid Waste Disposal Site	County of Sonoma	78-64
Central Disposal Site, Class III Waste Management Unit	County of Sonoma	89-8
Crescent City Solid Waste Disposal Site, Class III Waste Management Unit	County of Del Norte	89-100 89-83

SECTION 2
INTERIM CLASSIFICATION

This section applies to all MSW landfills listed in Subsection 1 that, as of the effective date of this Order, have not been reclassified under 23 CCR §§2510(d,e), 2530(b), and 2591(c).

(a) MSW landfills subject to this section are hereby granted interim status as Class III landfills under Chapter 15, as of the effective date of this Order, unless and until the landfill is reclassified in accordance with that chapter.

(b) Dischargers owning or operating an MSW landfill subject to this section shall submit a revised report of waste discharge by October 9, 1994, that is in full compliance with Article 9 of Chapter 15 and that provides all information necessary for the Regional Water Board to reclassify the landfill pursuant to 23 CCR §§2510(d,e) and 2591(c).

SECTION 3
Definitions

(a)	Affected Persons	All individuals who either own or occupy land outside the boundaries of the parcel upon which the landfill is located that has been or may be affected by the release of leachate or waste constituents, in the liquid or gas phase, from a MSW landfill.
(b)	Composite Liner	A liner that consists of two or more components which include a synthetic liner in direct and uniform contact with an underlying layer of low permeability soil.
(c)	Constituents of Concern	Are those constituents which are likely to be in the waste in the MSW landfill including transformation and breakdown products.
(d)	Existing Footprint	The areal projection portion of land covered by waste as of midnight on the day before the Federal Deadline. The term includes only areas covered by waste that was discharged in a manner consistent either with past good management practices or permitted operations.
(e)	Federal Deadline	The date listed in 4 CFR Part 258 when the majority of the federal MSW regulations become effective. The current date is October 9, 1993 unless otherwise modified.
(f)	Lateral Expansion	Any horizontal expansion beyond the existing footprint, as defined in subsection (d) above.

(g) MSW Landfill — For the purpose of this Order, means a Class II or Class III landfill that has accepted or accepts municipal solid waste or solid waste by-products such as ash.

(h) Unstable area — A location that is susceptible to natural or human-induced events capable of impairing the integrity of some or all of the landfill's structural components.

SECTION 4
Liner Requirements

(a) Define Existing Footprint

All dischargers operating after the Federal Deadline, shall document the existing footprint of the waste as of the Federal Deadline using photographs and topographic maps. Documentation shall be submitted to the Regional Water Board by January 15, 1994.

(b) Discharge Prohibition

As of the Federal Deadline, except as noted in subsection 3(c) below, discharge of municipal solid waste to areas that have not received waste is prohibited unless the disposal area is equipped with a composite liner meeting the following requirements:

i. The uppermost liner component is a synthetic liner at least 40 mils thick (60 mils for high density polyethylene) installed in direct contact with the underlying materials; and

ii. Has a lower liner component consisting of compacted soil at least two feet thick having a hydraulic conductivity no more than 1×10^{-7} cm/sec.

Alternative designs may be approved by the Executive Officer provided the design satisfies the criteria for an engineered alternative as defined by Chapter 15, Section 2510(b). The engineered alternative shall equal or exceed the performance of the above described composite liner system.

(c) Exemption from Prescriptive Standards

1. Liners Constructed prior to the Federal Deadline

Disposal areas constructed prior to the Federal Deadline which have not received waste as of the Federal Deadline must be retrofitted as follows:

i. A liner system consisting of a composite liner having its uppermost liner at least 40 mil thick (or 60 mil for high density polyethylene) installed in direct and uniform contact with the underlying materials.

2. Steep Sideslopes

Liner systems installed on those portions of a MSW landfill where sideslopes are too steep to permit construction of a stable composite liner meeting the criteria in Subsection 3(b) above shall include an alternative liner design that meets the performance criteria of 40 CFR 258.40(c) and is either:

i. A composite liner consisting of a 40 mil thick synthetic upper layer (60 mil thick for high density polyethylene); or

ii. Is not a composite liner, but includes a synthetic liner at least 60 mils thick (80 mils for high density polyethylene).

(d) Leachate Collection and Removal System

All liner systems shall include a leachate collection and removal system which conveys leachate to a collection point(s). Leachate conveyance on unlined or clay-lined areas is prohibited.

SECTION 5
Liquids Acceptance

(a) General Prohibition

On the Federal Deadline, the discharge of leachate or landfill gas condensate to a MSW landfill is prohibited unless:

1. The portion of the landfill to which leachate is being discharged is equipped with a composite liner meeting the requirements of Section 4(b) of this Order; and

2. The leachate or gas condensate is being returned to the landfill that produced it.

SECTION 6
Siting Criteria

(a) 100-year floodplains

All existing MSW landfills and lateral expansions located in 100-year floodplains must demonstrate that the waste management unit will not restrict the flow of the 100 year flood, reduce the temporary water storage capacity of the floodplain or result in inundation or washout of solid waste. A report documenting compliance with this provision is due by January 15, 1994.

Existing MSW landfills that cannot make this demonstration must close by October 9, 1996. The closure deadline may be extended by 2 years if the discharger

demonstrates to the Regional Water Board that there is no available alternative disposal capacity and no immediate threat to human health and the environment.

(b) Wetlands

Discharge of municipal solid waste to a wetland, as defined in 40 CFR 232.2(r), is prohibited unless the discharger completes all demonstrations required under 40 CFR 258.12(a).

(c) Fault Areas

Lateral expansions shall not be located within 200 feet of a Holocene fault. The Regional Water Board may prescribe an alternative setback less than 200 feet if the discharger demonstrates the integrity of all containment structures and that the alternative will be protective of human health and the environment.

(d) Unstable Areas

Existing MSW landfills and lateral expansions located in unstable areas must demonstrate the integrity of all containment structures. The discharger must consider factors presented in 40 CFR 258.15. A report documenting compliance with this provision is due by January 15, 1994.

If the discharger cannot demonstrate the integrity of the MSW landfill, affected portions of the landfill must close by October 9, 1996. The deadline may be extended up to two years by the Regional Water Board if the discharger demonstrates that there is no available alternative disposal capacity and there is no immediate threat to human health and the environment.

SECTION 7
Closure/Post Closure Plan

(a) Submittal of Closure Plans

1. Recently Closed MSW landfills

Dischargers who operate a MSW landfill that received waste after October 9, 1991 but will cease waste disposal by the Federal Deadline shall submit a report to the Regional Water Board by January 15, 1994 documenting that the landfill's final cover meets the requirements of 40 CFR 258.60(a) or submit modifications to its closure plan to comply with 40 CFR 258.60(a).

2. Operating MSW landfills

Dischargers who operate a MSW landfill that received waste on or after October 9, 1991 and that will not initiate final closure by the Federal Deadline, shall submit a closure and post closure maintenance plan to the Regional Water Board by the Federal Deadline that complies with 40 CFR 258.60 and 258.61 and Article 8, Chapter 15, Title 23, CCR.

3. Post Closure Maintenance

Post Closure maintenance must be conducted for minimum of 30 years.

SECTION 8
Deed Notation

(a) Deed notation

Following closure, the discharger shall provide proof to the Regional Board that the property deed or some other instrument that is normally examined during a title search has been modified, in perpetuity, to notify any potential purchaser of the property that:

i. The property has been used as a MSW landfill.

ii. Land use options for the property are restricted in accordance with the approved post closure plan and Waste Discharge Requirements for the landfill.

SECTION 9
Financial Assurance

(a) Financial assurance documents for closure, post closure and corrective action shall be prepared in accordance with the provisions of 40 CFR Part 258, Subpart G; Title 14, CCR administered by the Integrated Waste Management Board; and Article 5, Chapter 15, Division 3, Title 23, CCR.

Section 10
Implementation Schedule
Self Monitoring Program

(a) General Applicability

Unless the discharger proposes and the Executive Officer approves an alternative monitoring program that meets the requirements of Article 5, Chapter 15 and 40 CFR 258, Subpart E, the discharger shall determine compliance with this Order using the self monitoring program presented in this Order. The discharger shall implement the monitoring program as follows:

(1) By January 15, 1994 the discharger shall submit a report to the Regional Water Board that determines the distance between the waste management unit and any potential drinking water sources.

(2) Landfills within one mile of a potential drinking water source shall submit a monitoring systems report by August 9, 1994 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1994.

(3) Landfills farther than one mile from a potential drinking water source shall submit a monitoring systems report by August 9, 1995 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1995.

(b) The Monitoring Parameters and Constituent of Concern(COC) list shall be determined in accordance with Section 11 and 12 of this Order, respectively. For all new COC's, the discharger will immediately develop background concentrations and Concentration Limits in accordance with Section 13 and 14 of this Order.

(c) The Monitoring Systems Report shall:

(1) Identify all distinct bodies of groundwater that could be affected in the event of a release from the landfill. This list shall include at least the uppermost aquifer underlying the landfill and any permanent or ephemeral zones of perched water underlying the landfill;

(2) Demonstrate that the landfill's existing and proposed monitoring systems satisfy the following requirements;

(A) The groundwater monitoring system for each distinct groundwater body identified above must meet the requirements of 40 FR §§258.51(a,c, and d) and 23 CCR §2550.7(b); and

(B) Only for dischargers whose waste discharge requirements, as of the effective date of this Order, have not been revised to incorporate the July 1, 1991 revisions to Article 5, Chapter 15:

i. An MSW landfill in close proximity to any surface water body must meet the requirements of 23 CCR §2550.7(c); and

ii. An MSW landfill overlying an unsaturated zone that can be feasibly monitored must meet the requirements of 23 CCR §2550.7(d).

(3) Include a map showing the Monitoring Points, Background Monitoring Points and the Point of Compliance under 23 CCR §2550.5;

(4) Estimate the Compliance Period under 23 CCR §2550.6; and

(5) Include a list of all Constituents of Concern and Concentration Limits determined in accordance with Sections 12, 13 and 14 of this Order.

SECTION 11
Monitoring Parameters
Self Monitoring Program

(a) In accordance with the implementation schedule presented in Section 10(a), the discharger shall analyze water samples from each water-bearing medium for the following Monitoring Parameters unless the Regional Water Board approves alternative Monitoring Parameters that meet the requirements of both 23 CCR §§2550.0 et seq. and 40 CFR §§258.54. The discharger shall test the resulting data using either the statistical and non-statistical methods listed in Section 14(f) of this Order or alternative methods the Regional Water Board finds meets the requirements of 23 CCR §§2550.7(e)(6-10) and 40 CFR §258.53:

Volatile Organic Compounds (EPA method 601 and 602)
Metals (EPA 6010: arsenic, selenium and mercury by AA)
Mineral (Calcium, Magnesium, Sodium, Chloride and Sulfate)
General (Alkalinity, pH, Fluoride, Nitrate, Total Dissolved Solids and Chemical Oxygen Demand)

(b) For each medium, the Monitoring Points shall be monitored semiannually, once each Winter/Spring and Summer/Fall.

SECTION 12
Constituents of Concern
Self Monitoring Program

(a) Landfills lacking a functioning Leachate Collection System

(1) For any MSW landfill that does not have both a liner and a leachate collection and removal system (LCRS) that produces leachate, the list of Constituents of Concern (COC) is hereby revised to include all constituents listed in the waste discharge requirements as of the effective date of this Order, in addition to all constituents listed in Appendix II to 40 CFR Part 258. The discharger shall monitor all COCs every five years at a minimum; and

(2) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year, beginning with the date of this Order. Once this reference set of background data is collected, the discharger shall include it in the Monitoring Systems Report or in the next self-monitoring report.

(b) Landfills having a Leachate Collection System

(1) For any MSW landfill equipped both with a liner and with a leachate collection and removal system (LCRS) that produces leachate, the Constituent of Concern list is revised to include all waste constituents listed in the waste discharge requirements as of the effective date of this Order, and each constituent listed in Appendix II to 40 CFR Part 258 that is present in leachate samples obtained from the LCRS.

(2) A compound is defined to be present in leachate if the compound is detected in two consecutive samples from the LCRS. Samples shall be taken in October and April. The April sample is needed only when the October sample identifies new compounds not already included on the COC list.

(3) Sample results shall be submitted to the Regional Board in July of each year. The report shall identify all Appendix II constituents detected that are not on the landfill's Constituent of Concern list and all constituents which must be added to the landfill's COC list.

(4) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year following the date the constituent is submitted to the Regional Water Board as a new COC. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal.

SECTION 13
Concentration Limits
Self Monitoring Program

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter shall be established as follows, and shall be used as the basis of comparison with data from the Monitoring Points:

(a) Concentration Limits shall be set at the background value of the constituent based on historical data; or

(b) The constituent's Concentration Limit may be established during each Monitoring Period using data from all samples collected during that Monitoring Period in the event the discharger establishes the occurrence of seasonal or temporal variations in water quality; or

(c) The discharger may propose, for Regional Water Board approval, a Concentration Limit greater than background for use during, or after, corrective action.

SECTION 14
Detection Monitoring
Self Monitoring Program

The following detection monitoring program applies to each MSW landfill unless, and until, the Regional Water Board revises the waste discharge requirements for the landfill to include an alternative detection monitoring program that complies with both the federal MSW regulations and with the most recent revisions to Article 5 of Chapter 15.

(a) Sampling and Analytical Methods

Sample collection, storage, and analysis shall be performed according to the most recent version of Test Methods for Evaluating Solid Waste (USEPA publication "SW-846"), and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard USEPA Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Water Board Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board. In addition, the discharger is responsible for seeing that the laboratory analysis of all samples meets the following restrictions:

(1) The methods of analysis and the detection limits used shall be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from Background Monitoring Points, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects involved;

(2) Analytical results falling between the MDL and the practical quantitation limit (PQL) shall be reported as "trace", and shall be accompanied both by the (nominal or estimated) MDL and PQL values for that analytical run;

(3) MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California's laboratory accreditation procedures. These nominal MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived nominal MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved;

(4) All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation for any recovery rate that is less than 80%, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged;

(5) Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for reference;

(6) Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte. The MDL and PQL shall be determined or estimated for each peak.

(b) Required Monitoring Reports

(1) All Monitoring Points assigned to detection monitoring shall be monitored once each Winter/Spring and Summer/Fall (Winter/Spring and Summer/Fall Reporting Periods end on March 31 and September 30, respectively).

(2) Annual Report

The discharger shall submit an annual report to the Regional Water Board in January covering the previous monitoring year. This report may be combined with the semiannual monitoring report. The report shall contain the following at a minimum:

(A) For each Monitoring Point, laboratory data will be submitted in graphical format for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct

the discharger to carry out a preliminary investigation [23 CCR §2510(d)(2)], the results of which will determine whether or not a release is indicated;

(B) All monitoring data obtained during the previous two six-month Reporting Periods shall be presented in tabular form as well as on diskettes either in MS-DOS/ASCII format or in another file format acceptable to the Regional Water Board's Executive Officer;

(C) A comprehensive discussion of the compliance record, and any corrective actions taken or planned which may be needed to bring the discharger into full compliance with the landfill's waste discharge requirements;

(D) A map showing the area, if any, in which filling has been completed during the previous calendar year;

(E) A written summary of monitoring results and monitoring system(s), indicating any changes made or observed since the previous annual report;

(F) For MSW Landfills having leachate monitoring/control facilities, an evaluation of their effectiveness, pursuant to 23 CCR §§2543(b,c, & d).

(3) Routine Constituent of Concern Monitoring

In the absence of a release being indicated, the discharger shall monitor all Constituents of Concern and submit a report as follows:

(A) The discharger shall sample all Monitoring Points for all COCs every fifth year, beginning with the Spring of 1996. Subsequent COC monitoring efforts being carried out every fifth year thereafter, alternating between the Fall and Spring monitoring periods. The COC Report may be combined with any Monitoring Report;

(B) The discharger shall monitor for all Constituents of Concern provided that such monitoring need only encompass those Constituents of Concern that do not also serve as Monitoring Parameters.

(4) Minimum Content of Monitoring Reports

All reports shall be submitted by January 15 and July 15. The reports shall be comprised of at least the following, in addition to the specific contents listed above.

(A) A letter summarizing the essential points in the report. This letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned to correct those violations. If the discharger has previously submitted a detailed time schedule for correcting said violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. Each monitoring report and the transmittal letter shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the

discharge originates. The transmittal letter shall contain a statement by this official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

(B) For Detection Monitoring and COC Reports only:

1. For each monitored groundwater body, a description and graphical presentation of the velocity and direction of groundwater flow under/around the landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report; and

2. For each monitoring well, a description of the method and time of water level measurement and a description of the method of purging used both before sampling and after sampling to remove the water that was in the well bore while the sample was being taken; and

3. For each Monitoring Point sampled; a description of the type of pump or other device used and its vertical placement for sampling; a detailed description of the sampling procedure i.e., number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used; the date and time of sampling; the name and qualifications of the person actually taking the samples, and any other observations;

(C) A map (or copy of an aerial photograph) showing the locations of observation stations, Monitoring Points, and Background Monitoring Points;

(D) For Detection Monitoring and COC Reports only, the laboratory results of all analyses;

(E) A statement as to the condition and performance of any leachate monitoring and control facilities, and of the runoff/run-on control facilities;

(F) The quantity and types of wastes discharged and the locations in the landfill where waste has been placed since submittal of the last such report.

(c) Contingency Responses

(1) Leachate Seeps

The discharger shall immediately report by telephone concerning the discovery any previously unreported seepage from the disposal area. A written report shall be filed with the Board within seven days, containing at least the following information:

(A) A map showing the location(s) of seepage;

(B) An estimate of the flow rate;

(C) A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

(D) Corrective measures approved (or proposed for consideration) by the Regional Water Board Executive Officer.

(2) Response to Initial Indication of Release

Should the initial statistical or non-statistical comparison indicate, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified, the discharger shall: immediately notify the Regional Water Board staff verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved; shall provide written notification by certified mail within seven days of such determination [23 CCR §2550.8(j)(1)]; and shall carry out a discrete retest with 30 days in accordance with subsection (f)(3) of this section. If the retest confirms the existence of a release, the discharger shall carry out the requirements of subsection (c)(4) of this section. In any case, the discharger shall inform the Regional Water Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven days of completing the retest.

(3) Physical Evidence of a Release

If either the discharger or the Regional Water Board Executive Officer determines that there is significant physical evidence of a release [23 CCR §2550.1(3)], the discharger shall:

(A) Immediately notify the Regional Water Board by certified mail (or acknowledge the Regional Water Board's determination);

(B) Carry out the requirements of subsection (c)(4) of this section for all potentially-affected monitored media; and

(C) Carry out any additional investigations stipulated in writing by the Regional Water Board Executive Officer for the purpose of identifying the cause of the indication.

(4) Response to a Confirmed Release

If the discharger concludes that a release has been discovered:

(A) If this conclusion is not based upon monitoring for all Constituents of Concern, then the discharger shall, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis within thirty days of discovering the release. Within seven days of receiving the laboratory analytical results, the discharger shall notify the Regional Water Board, by certified mail, of the concentration of all Constituents of Concern at each Monitoring Point; this notification shall include a synopsis showing those constituents that exhibit an unusually high concentration. Because the data from this scan is not to be statistically tested against background, only a single datum is required for each Constituent of Concern at each Monitoring Point [23 CCR §2550.8(k)(1)];

(B) The discharger shall, within 90 days of confirming a release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program that:

1. Is intended to define the nature and extent of the release and meets the requirements of 23 CCR §2550.8(k)(5) and §2550.9; and

2. Satisfies the requirements of 40 CFR §258.55(g)(1)(ii) by committing to install at least one monitoring well at the facility boundary directly downgradient of the center of the release, immediately after delineating the nature and extent of the release under 23 CCR §2550.9(b);

(C) 90 days after the Regional Board directs the discharger to implement the Evaluation Monitoring Program, the discharger will submit a report delineating the vertical and horizontal limits of the release for all Constituents of Concern. This delineation effort shall be carried out in addition to any ongoing monitoring program (e.g., detection monitoring program); nevertheless, the discharger's delineation effort shall encompass all relevant monitoring data.

(D) The discharger shall, within 180 days of confirming a release, submit a preliminary engineering feasibility study meeting the requirements of 23 CCR §2550.8(k)(6).

(5) Release beyond the Facility Boundary

Any time a release beyond the facility boundary occurs, the discharger shall notify all persons who either own or reside upon the land that directly overlies any part of the plume.

(A) Initial notification to affected persons shall be accomplished within 14 days of making this conclusion and shall include a description of the discharger's current knowledge of the nature and extent of the release.

(B) Subsequent to initial notification, the discharger shall provide updates to all affected persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

(C) Each time the discharger sends a notification to affected persons, the discharger shall provide the Regional Water Board, within seven days of sending such notification, with both a copy of the notification and a current mailing list of affected persons.

(6) Response to VOC Detection in Background

Except for VOC's previously validated as not originating from the landfill, any time the laboratory analysis of a sample from a Background Monitoring Point, shows either (a) two or more VOCs at or above their respective MDL; or (b) one VOC at or above its respective PQL, then the discharger shall immediately notify the Regional Water Board by phone that possible background contamination has occurred, shall follow up with written notification by certified mail within seven days, and shall obtain two new independent VOC samples from that Background Monitoring Point and send them

for laboratory analysis of all detectable VOCs within thirty days. If either or both of these retest samples validates the presence of VOC(s) at that Background Monitoring Point, the discharger shall:

1. Immediately notify the Regional Water Board that VOC(s) are present at Background Monitoring Point(s), and follow-up with written notification submitted by certified mail within seven days of validation; and

2. Within 180 days of validation, submit a report, acceptable to the Executive Officer, which examines the possibility that the detected VOC(s) originated from the landfill (e.g., using concentration gradient analyses), and proposes appropriate changes to the monitoring program.

(B) If, after reviewing the report, the Executive Officer determines that the VOC(s) originated from a source other than the landfill, the Executive Officer will make appropriate changes to the monitoring program.

(C) If, after reviewing the report, the Executive Officer determines that the VOC(s) most likely originated from the landfill, the discharger shall conclude that a release has been detected and shall immediately investigate the release in accordance with subsection (c)(4) this section.

(d) Water Sampling and Analysis for Detection Monitoring

(1) For any given monitored medium, samples shall be taken from all Monitoring Points during the latter third of the Reporting Period within a span not exceeding 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [23 CCR §2550.7(e)(12)(B)]. Sample procurement shall be carried out as late in the Reporting Period as feasible, considering the time needed to analyze the samples, analyze the resulting data, and submit the monitoring report.

(2) Groundwater sampling shall also include an accurate measurement of the groundwater surface elevation and field parameters (temperature, electrical conductivity, turbidity) [23 CCR §2550.7(e)(13)]. Groundwater elevations shall be taken prior to purging the well.

(3) Statistical or non-statistical analysis shall be carried out as soon as the monitoring data is available.

(e) For each monitored groundwater body, the discharger shall determine the groundwater flow rate and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. This information shall be included in the semiannual monitoring reports.

(f) Statistical and Non Statistical Methods

The following data analysis methods shall be used at MSW landfills unless and until the discharger proposes, and the Regional Water Board revises the waste discharge requirements to include, data analysis methods that comply with the July 1, 1991 revision of Article 5 of Chapter 15. Nevertheless, dischargers who own or operate MSW landfills having waste discharge requirements that have been revised to comply with revised Article 5 shall use the following non-statistical data analysis methods for constituents that cannot be addressed by statistical means and shall use the

following statistical analysis scheme on those constituents for which the Regional Water Board has not yet approved a statistical method.

The discharger subject to this section shall use the most appropriate of the following methods to compare the downgradient concentration of each monitored constituent (or parameter) with its respective background concentration to determine if there has been a release from the landfill. For any given data set, the discharger shall first decide if statistical analysis is possible, by reference to the relative frequency with which the constituent is detected in background samples. For a constituent that qualifies for statistical analysis, the discharger shall proceed sequentially down the list of statistical analysis methods listed below, using the first method for which the data qualifies. Those constituents for which no statistical method is appropriate shall be analyzed by the non-statistical method. If the initial statistical/non-statistical analysis tentatively indicates the detection of a release, the discharger shall implement the retest procedure under subsection (f)(3) of this section.

(1) Statistical Methods.

The discharger shall use one of the following statistical methods to analyze Constituents of Concern or Monitoring Parameters which exhibit concentrations which equal or exceed their respective MDL in at least ten percent of the background samples taken during that Reporting Period. Except for pH, which uses a two-tailed approach, the statistical analysis for all constituents and parameters shall be one-tailed (testing only for statistically significant increase relative to background):

(A) One-Way Parametric Analysis of Variance (ANOVA), followed by multiple comparisons [§2550.7(e)(8)(A)]. This method requires at least four independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data for the parameter or constituent, obtained during a given sampling period, has not more than 15% of the data below the PQL. Prior to analysis, replace all "trace" determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section;

(B) One-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine independent samples from each Monitoring Point and Background Monitoring Point; therefore, the discharger shall anticipate the need for taking more than four samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given Sampling Period, has not more than 50% of the data below the PQL. The ANOVA shall be carried out at the 95% confidence

level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section; or

(C) Method of Proportions. This method shall be used if the "combined data set" — the data from a given Monitoring Point in combination with the data from the Background Monitoring Points — has between 50% and 90% of the data below the MDL for the constituent or parameter in question. This method: (a) requires at least nine downgradient data points per Monitoring Point per Reporting Period; (b) requires at least thirty data points in the combined data set; and, (c) requires that $n * P > 5$ (where n is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL). Therefore, the discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99% confidence level. If the analysis results in rejection of the Null Hypothesis (i.e., that there is no release), the discharger shall conclude that a release is tentatively indicated for that constituent or parameter, and shall immediately implement the retest procedure under subsection (f)(3) of this section.

(2) Non-Statistical Method. The discharger shall use the following non-statistical method for analyzing all constituents which are not amenable to statistical analysis by virtue of having being detected in less than 10% of applicable background samples. A separate variant of this test is used for the VOC_{water} Composite Monitoring Parameter and for qualifying Constituents of Concern. Regardless of the test variant used, the method involves a two-step process: (a) from all constituents to which the test variant applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample from a given Monitoring Point, then (b) evaluate whether the listed constituents meet either of the test variant's two possible triggering conditions. For each Monitoring Point, the list described above shall be compiled based on either: the data from the single sample (for that constituent) taken during that Reporting Period from that Monitoring Point, or (where several independent samples have been analyzed for that constituent at a given Monitoring Point) the data from the sample which contains the largest number of detected constituents. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period (at least one sample from each Background Monitoring Point). The method shall be implemented as follows:

(A) Version for the Volatile Organics Composite Monitoring Parameter For Water Samples (VOC_{water})

For any given Monitoring Point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all detectable VOCs, including at least all 47 VOCs listed in Appendix I to 40 CFR Part 258. The discharger shall compile a list of each VOC which exceeds its MDL in the Monitoring Point sample (an unidentified peak must exceed its presumed MDL to be a candidate for the list), and also exceeds its MDL in

less than ten percent of the samples taken during that Reporting Period from that medium's Background Monitoring Points. The discharger shall conclude that a release is tentatively indicated for the VOC_{water} composite Monitoring Parameter if the list either; (a) contains two or more VOCs that equals or exceeds its MDL; or (b) contains one VOC that equals or exceeds its PQL;

(B) Version for Constituents of Concern.

During Constituent of Concern monitoring, the discharger shall compile a list of constituents of concern at each Monitoring Point that equals or exceeds their respective MDL at the Monitoring Point yet do so in less than ten percent of the background samples taken during that Reporting Period. The discharger shall conclude that a release is tentatively indicated if the list either; (a) contains two or more constituents that equals or exceeds its MDL; or (b) contains one constituent which equals or exceeds its PQL.

(3) Discrete Retest Procedure

In the event that the discharger concludes that a release has been tentatively indicated, the discharger shall collect two new suites of samples (for VOC_{water} or for the indicated Constituent[s] of Concern) from the Monitoring Point in question within 30 days of such indication. Resampling of the Background Monitoring Points is optional. As soon as the retest data is available, the discharger shall use the same statistical method as the initial test to separately analyze each of the two suites of retest data for the affected Monitoring Point. For any indicated Monitoring Parameter or Constituent of Concern, if the test results of either (or both) of the retest data suites confirms the original indication, the discharger shall conclude that a release has been discovered and shall carry out the requirements of subsection (c)(4) of this section. All retests shall be carried out only for those Monitoring Point(s) at which a release is tentatively indicated, and only for the Constituent of Concern or Monitoring Parameter which triggered the indication there, as follows:

(A) If a (parametric or non-parametric) ANOVA method was used in the initial test, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two new suites of samples taken from the indicating Monitoring Point;

(B) If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, carried out separately on each of the two new suites of samples from the indicating Monitoring Point;

(C) If the non-statistical method was used:

1. Because the VOC_{water} composite Monitoring Parameter is a single parameter which addresses an entire family of constituents likely to be present in any landfill release, the scope of the laboratory analysis for each of the two retest samples shall

include all VOCs detectable in that retest sample. Therefore, a confirming retest for either parameter shall have validated the original indication even if the detected constituents in the confirming retest sample(s) differs from those detected in the sample which initiated the retest;

2. Because all Constituents of Concern that are jointly addressed in the non-statistical test under subsection (f)(2)(B) above, remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest of Constituents of Concern shall address only those constituents detected in the sample which initiated the retest.

I, Benjamin D. Kor, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on September 22, 1993.

Benjamin D. Kor
Executive Officer

(order - Final Version)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
5550 SKYLANE BLVD. SUITE A
ROSA, CA 95403
(707) 576-2220

July 13, 1993

Mr. John Sciborski
Public Works Department
575 Administration Drive
Santa Rosa, CA 95401

SUBJECT: Stormwater Monitoring-Compost Operations, Central SWDS, Sonoma County

Dear Mr. Sciborski:

We have reviewed the County's proposed stormwater monitoring program for the compost operation at the Central SWDS. Generally, this type of discharge would be addressed under a stormwater monitoring permit. Since information about this type of operation is lacking, it is our understanding that the County has agreed to a voluntary monitoring program. The data and potential permit revisions will be evaluated in the future. Consistent with provisions of the stormwater monitoring regulations, our review was based on a single, basic assumption, that being "the discharge of leachate to the stormwater conveyance system is prohibited". Only rainfall will be allowed into the stormwater drainage system. The function of stormwater monitoring plan is to evaluate the County's operations and runoff with respect to the no discharge prohibition. Comments are divided into two sections for clarity; operations and monitoring.

OPERATIONS

Discharge from the compost pond will be allowed only during rainfall events. Insufficient information concerning daily operations has been submitted to assess the adequacy of daily operations with regards to leachate production. For example, large quantities of manure or other material may be admixed with yard waste. Surface water discharge from this material should not be allowed. Handling and storage procedures for this material have not been submitted. Likewise, contingency plans to prevent leachate production have not been received.

MONITORING

Monitoring presents a unique challenge due to the transitory nature of leachate productions and the lag time through the drainage system.

The County's proposal does not account for the transitory nature of possible discharges. In addition, the proposed monitoring parameters of Electrical Conductivity and pH must be expanded to include other compounds of concern. The attachment presents a proposed monitoring program for your consideration.

Once a monitoring program is agreed upon we propose to formally issue this program to the County. Your prompt review of this program would be appreciated.

However, no later than August 30, 1993, the County should submit its operations plan and comments regarding the proposed monitoring program.

If you would like to discuss these issues further, we are available at your convenience.

Please contact our office at (707) 576-2220.

Sincerely,

Richard Azevedo

Richard Azevedo
Associate Water Resource Control Engineer

RGA:tab/compos

Enclosure

cc: Ken Wells, Sonoma County Public Works Department
Bob Swift, Sonoma County Environmental Health Department

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. 93-77

FOR

SONOMA COUNTY
CENTRAL SOLID WASTE DISPOSAL SITE
COMPOST OPERATIONS

Sonoma County

OPERATIONS

Daily and monthly volumes of yard waste and admix materials shall be recorded for a period of one year. Type of admix material will be recorded. Daily rainfall amount shall be reported.

Between October 1 and May, daily inspection of the compost operations will be conducted. Occurrence of leachate will be noted in the daily log.

COMPOST AREA

Once per month between October and May, during or after the first storm that causes noticeable runoff, sample internal areas for:

Electrical Conductivity	Combined Nutrient	BOD
pH	Series	COD

Twice per year in November and March, sample internal runoff for the following in addition to the constituents listed above:

Lead	Mercury	Copper
Cadmium	Chrome	Sodium
Chloride	Hardness	

At the time of sampling, describe and record activities within each area, such as: total area of bermed area, activities within each bermed area, area used by each activity. Other descriptions of activities as necessary.

STORMWATER MONITORING

Sample Point	Description
No. 1	inlet of compost pond
No. 2	compost pond
No. 3	sedimentation basin No. 2

Twice monthly, immediately prior to discharge from the compost pond, sample points No.s 2 & 3 for:

Electrical Conductivity	Combined Nutrient	BOD
pH	Series	COD

Two hours after discharge from the compost pond begin, resample point No. 3 for the above listed compounds. Record flowrates from point No's. 2 & 3. After rainfall has ceased, sample Point No. 1 for the above listed compounds.

REPORTING

Monitoring reports shall be submitted on January 30, April 30, July 30 and October 30. Lab data shall be provided in a tabular format. Each report shall present current and historical data (prior to compost operations) and evaluate any changes in the data attributable to the compost operations.

ORIGINAL SIGNED BY

Ordered by _____

Benjamin D. Kor
Executive Officer

July 13, 1993

(compsmr)

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. 97-49

FOR

COUNTY OF SONOMA
CENTRAL SOLID WASTE DISPOSAL SITE
COMPOST OPERATIONS

Sonoma County

OPERATIONS

Record daily and monthly tonnages of shredded green waste, other feedstocks and additives. Record daily rainfall amounts.

Inspect compost facilities before and after all rainfall events and record observations. Record date and location of all leachate seepage, ponding, pad failure and drainage problems.

STORM WATER SAMPLING

Storm water runoff samples shall be collected monthly from November through April during or shortly after runoff producing rainfall events. Storm water samples shall be collected at the following locations:

1. Above the compost pad in the ditch that carries runon storm water around the compost pad.

2. At the outlet from the compost pond located immediately below the compost pad.

3. At the point where runoff from the compost pad discharges to surface waters downstream from the bottom of the landfill.

STORM WATER SAMPLE LABORATORY ANALYTICAL METHODS

Storm water samples shall be analyzed by a California State Certified Laboratory for the following constituents using the following EPA Methods:

Constituent	Method
Electrical Conductivity	EPA 120.1
pH	EPA 150.1
BOD	EPA 405.1 or SM5210B
Temperature	EPA 170.1
Total Nitrogen	Computed from tests below

Constituent	Method
Ammonia (ionized and unionized)	EPA 350.2
Kjeldahl Nitrogen	EPA 351.3
Nitrate Nitrogen	EPA 353.3
Nitrite Nitrogen	EPA 353.3
Total Phosphate	EPA 365.2
Orthophosphate	EPA 365.2

Field test equipment can be used for temperature, pH, and electrical conductivity.

STORM WATER MONITORING

Storm water samples shall be collected monthly from November through April from the sampling locations specified above and for the constituents specified above.

STATIC BIOASSAY TESTING

Once a year site runoff at Station #3 shall be collected and used to perform a static 96 hour bioassay test. The test species shall be juvenile rainbow trout and the results shall be reported as per cent survival.

REPORTING

Monitoring reports shall be submitted to the Regional Water Board by the 15th day of January, April, July, and October. The data shall be arranged in tabular form on 8 1/2 by 11 sheets so that the date, the constituents, and the concentrations are readily discernible. If the discharger is unable to collect samples for any reason, the monitoring report shall sp indicate. The monitoring report and any narrative descriptions shall be properly titled, certified as true and correct, signed by a responsible official and submitted to the Regional Water Board.

Ordered by _____
Benjamin D. Kor
Executive Officer

May 6, 1997

(scmr)

BAY AREA AIR QUALITY
MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 2254

Page: 1

Expires: JUN 1, 1998

This document does not permit the holder to violate any District regulation or other law.

Sonoma County Department of Public Works
575 Administration Dr, Room 117A
Santa Rosa, CA 95403

Location: 500 Mecham Road
Petaluma, CA 94952

S#	DESCRIPTION	[Schedule]	PAID
1	CHEM> Landfill with gas collection system, Multi-material Sonoma County Central Landfill with Gas Collection System Abated by: A8 Water Spray System A2 Flare	[K]	610
	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B]	116
5	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B]	116
5	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B]	116
	Coml/Inst Reciprocating Engine, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B]	116
	Internal Combustion - Other, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B, 331 days]	95
0	Internal Combustion - Other, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B, 331 days]	95
1	Internal Combustion - Other, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B, 331 days]	95

Operating parameters described above are based on information supplied by permit holder and may differ from the limits in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to ed. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

SAN AREA AIR QUALITY
MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 2254 Page: 2 Expires: JUN 1, 1998

his document does not permit the holder to violate any District regulation or other la

#	DESCRIPTION	[Schedule]	PAID
2	Internal Combustion - Other, 1138 hp, Landfill gas Lean Burn IC Engine and Generator Set	[B, 331 days]	95

9 Permit Sources, 0 Exempt Sources
Total Fees $5298.00
Invoice #29276 Paid

*** See attached Permit Conditions ***

e operating parameters described above are based on information supplied by permit holder and may differ from the limits t forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY
MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

s document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

Source# 1	subject	to	condition	ID# 4044
Source# 4	subject	to	condition	ID# 6117
Source# 5	"	"	"	ID# 6117
Source# 6	"	"	"	ID# 6117
Source# 7	"	"	"	ID# 6117
Source# 9	"	"	"	ID# 6117
Source# 10	"	"	"	ID# 6117
Source# 11	"	"	"	ID# 6117
Source# 12	"	"	"	ID# 6117

*** PERMIT CONDITIONS ***

CONDITION ID #4044

Sonoma County Landfill
Permit Conditions for S-1 abated by A-2 and A-8

Revised 7/14/95 by Application #12628
Administratively Revised 2-15-96 by CSA
Conditions #12 and #13 Added 2-5-97 by RTH

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.

2. Wells shall not be shut off, disconnected or removed from operation without written authorization from the District.

3. If the collection system exhibits breakdown or if any isolation or adjustment valve are closed in excess of 12 hours in any calender month for maintenance, a variance from the District Hearing Board shall be immediately applied for.

4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the District.

5. The combustion temperature of the flare shall be maintained at a minimum of 1400 degree Fahrenheit and a residence time of 0.3 second. These operating conditions are subject to adjustment if source test data demonstrates significant NOx or Co reduction at a different temperature and/or residence time.

6. A flow meter to measure gas flow into the flare shall be installed and maintained in good working condition.

7. The flare shall be equipped with both local and remote alarm systems.

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

8. The flare shall be equipped with a combustion temperature readout monitor and continuous recorder. The temperature charts shall be retained for at least two years from the date of recording and shall be made available to the District staff for inspection.

9. The landfill shall receive municipal waste in quantities not to exceed the following limits:

   a. 2500 tons per day;
   b. 500,000 tons per consecutive 365 day period.

   Quantities of waste received shall be entered in a District approved log on a daily basis, and totalled to demonstrate compliance with the permit condition. These records shall be kept at the site for at least 24 months from the date the data is entered, and shall be made available to the District staff for inspection.

10. Particulate emissions from any operation of the landfill operations shall be abated by water spray A-8, if necessary, so that visible dust emissions shall not exceed Ringelmann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.

11. If the plant receives two or more Violation Notices from the District for "Public Nuisance" in any consecutive 12 month period, the owner/operator of this plant shall submit to the District within 30 days, an application to modify the Permit to Operate to include the following control measures as applicable or any order that the District deem necessary and appropriate.

    a. The paving of all roads associated with landfill operations.

*** PERMIT CONDITIONS ***

b. The use of chemical suppressant to control fugitive dust emissions from roadways associated with this landfill.

12. In no event shall any filled area be uncontrolled in excess of more than twelve months.

13. Records of the amount of waste received and the fill area in use shall be kept at the landfill and retained for two years. Records shall be available to the District staff upon request.

CONDITION ID #6117

S-4 through S-7 (P/A # 13313; Revised: 10/24/94):
S-9 through S-12(P/A #13314 & 14941; Revised: 7/21/95)

1. Under no circumstances shall raw landfill gas be vented to the atmosphere .
2. The flare, A-1, shall be operated when one or more engines are down and whenever the flow of landfill gas exceeds the capacity of the engine-generators S-1 through S-4 and S-9 through S-12. Gas flow records shall be maintained to show compliance with this condition. An automatically controlled landfill gas valve shall be installed, and maintained to insure that landfill gas is immediately made available for flaring to the flare when one or more engines are down.
3. The engines S-4 through S-7, and S-9 through S-12 shall be fired exclusively on landfill gas. If required, natural gas can be used as a supplemental fuel, but it shall not reduce or replace landfill gas available for use in the engine-generators. Natural gas shall not be used as supplemental fuel when flare is operating concurrently with engine-generators.
4. The total combined output of the engines, S-4 through

*** PERMIT CONDITIONS ***

S-7, and S-9 through S-12 is limited to 79.751E+6 hp-hr per consecutive 365 day period. Daily records shall be maintained to show compliance with this condition.

5. District approved flowmeters, to measure landfill gas flow into the engines, shall be installed prior to any operation and maintained in good working condition.
6. NOX emissions, calculated as NO2, from S-4 through S-7, and S-9 through S-12 shall not exceed 1.0 gram/hp-hr.
7. CO emissions from S-4 through S-7, and S-9 through S-12 shall not exceed 2.2 grams/ hp-hr.
8. POC emissions from S-4 through S-7, and S-9 through S-12 shall not exceed 0.563 gram/hp-hr.
9. A source test shall be performed on any one of the engines S-4 through S-7, and S-9 through S-12 within 60 days of start-up to demonstrate compliance with conditions 6, 7, and 8. Such source test shall be performed annually thereafter. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures. They shall be notified at least 10 days in advance of each source test. The source test report shall be submitted to the Source Test Section for their approval, with a copy being sent to the Permit Services Division within 30 days of the test date.
10. A characterization of the landfill gas shall be performed con-currently with each source test. The landfill gas sample shall be drawn from the main landfill gas header. The landfill gas characterization shall be performed in accordance with current California Air Resources Board testing guidelines for Calderon specified air contaminants, total chlorinated compounds, methane, POC, CO2, O2, and N2. The results of this characterization shall be submitted to the District within 60 days of start-up. Thereafter, a landfill characterization for the Calderon specified air contaminants shall be performed annually, and the data shall be submitted to the District within 30 days of the testing.
11. Any landfill gas characterization from the engine header

*** PERMIT CONDITIONS ***

which indicates the presence of toxic compounds in excess of the following unabated concentrations and presence of any other toxic compounds not listed below shall require the permit holder to submit to the District for review a risk analysis. The risk analysis shall be submitted to the District within 30 days of the results of the characterization and be referenced to this application number.

Unabated concentrations:

Benzene = 0.8 ppmv
Trichloroethylene = 1.2 ppmv
Perchloroethylene = 2.1 ppmv
Methylene Chloride = 2.0 ppmv
Toluene = 17 ppmv
Vinyl Chloride = 0.76 ppmv
Methyl Chloroform = 0.2 ppmv

12. Daily records shall be maintained, in a District approved logbook, of the amount of landfill and natural gas burned in the engines. The logbook shall be kept on site for at least two years from the date the data is recorded, and shall be made available to the District staff for inspection.

---------- END OF CONDITIONS ----------

** SOURCE EMISSIONS **

PLANT # 2254
May 7, 1997

Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	CO
Sonoma County Central Landfill with Gas Co	752	291	-	-	-
Lean Burn IC Engine and Generator Set	4	27	55	4	117
Lean Burn IC Engine and Generator Set	4	27	56	4	117
Lean Burn IC Engine and Generator Set	4	27	56	4	117
Lean Burn IC Engine and Generator Set	4	27	56	4	117
Lean Burn IC Engine and Generator Set	-	-	-	2	-
Lean Burn IC Engine and Generator Set	-	-	-	2	-
Lean Burn IC Engine and Generator Set	-	-	-	2	-
Lean Burn IC Engine and Generator Set	-	-	-	2	-
T O T A L S	768	399	223	24	468

** PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT **

Pollutant Name	Emissions lbs/day
Benzene	.93
Perchloroethylene (PERC)	5.77
Trichloroethylene	1.66
Vinylidene chloride	.38
Chloroform	.08
Methylene chloride	11.39
Vinyl chloride	1.51

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

RECEIVED

October 31, 1994

1994 NOV -2 P 4:35

Sonoma County, Department of Public Works
575 Administration Dr., Room 117A
Santa Rosa, CA 95403

SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

Attention: Alex Sebastian

COPY:
50-01-17.10
Ed Walker
Ken Wells
Rich Doble
Jim Kennelly
Jeff Flocher
Charlie @ MCS
MIKE L. @ MCS

Application Number: 13313
Equipment Location:
500 Meacham Road
Petaluma, CA 94952

Dear Applicant:

This letter is to advise you that your application for changes in conditions for the following are approved:

S-4 **I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-5 **I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-6 **I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-7 **I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**

Item 2: Co emission factor is changed from 2.1 g/hp-hr to 2.2 g/hp-hr (See item 7 of the permit condition).
Item 3: The use of the flare con-currently with the engine-generators is permitted at 2452 hours per year (See item 2 of the revised permit condition) so that facility-wide NO_X emissions (49 tpy) are less than 50 tons per year.

In reference to condition #13, our records show that the District has provided a total of 28.938 tpy of NO_X and 24.73 tpy of POC emission reduction credits for your facility. These amounts will have to be offset in the future if you wish to permit your facility at or above 50 tpy of NO_X or POC.

We have made necessary changes to our records so that your annual renewal will reflect this change.

Attached please find the new Condition #6117 associated with the above equipment

Please include your application number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh - Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

JAS:DNS:spu

S-4 through S-7 (P/A # 13313; Revised: 10/24/94):

1. Under no circumstances shall raw landfill gas be vented to the atmosphere .
2. The flare, S-2, shall be operated when one or more engines are down. The flare can also be operated con-currently with the engine-generators for 2452 hours per consecutive 365 day period. Daily records shall be maintained to show compliance with this condition. An automatically controlled landfill gas valve shall be installed and maintained to insure that landfill gas is immediately made available for flaring to the flare when one or more engines are down.
3. The engines S-4 through S-7 shall be fired exclusively on landfill gas. If required, natural gas can be used as a supplemental fuel, but it shall not reduce or replace landfill gas available for use in the engine-generators. Natural gas shall not be used as supplemental fuel when flare is operating con-currently with engine-generators.
4. The total combined output of the engines, S-4 through S-7, is limited to 39.8755 E+6 hp-hr per consecutive 365 day period. Daily records shall be maintained to show compliance with this condition.
5. District approved flowmeters, to measure landfill gas flow into the engine, shall be installed prior to any operation and maintained in good working condition.
6. NOX emissions, calculated as NO2, from S-4 through S-7 shall not exceed 1.0 gram/hp-hr.
7. CO emissions from S-4 through S-7 shall not exceed 2.2 grams/ hp-hr.
8. POC emissions from S-4 through S-7 shall not exceed 0.563 gram/hp-hr.
9. A source test shall be performed on any one of the engines S-4 through S-7 within 60 days of start-up to demonstrate compliance with conditions 6, 7, and 8. Such source test shall be performed annually thereafter. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures. They shall be notified at least 10 days in advance of each source test. The source test report shall be submitted to the Source Test Section for their approval, with a copy being sent to the Permit Services Division within 30 days of the test date.
10. A characterization of the landfill gas shall be performed con-currently with each source test. The landfill gas sample shall be drawn from the main landfill gas header. The landfill gas characterization shall be performed in accordance with current California Air Resources Board testing guidelines for Calderon specified air contaminants, total chlorinated compounds, methane, POC, CO2, O2, and N2. The results of this characterization shall be submitted to the District within 60 days of start-up. Thereafter, a landfill characterization for the Calderon specified air contami-

nants shall be performed annually and the data shall be submitted to the District within 30 days of the testing.

11. Any landfill gas characterization from the engine header which indicates the presence of toxic compounds in excess of the following unabated concentrations and presence of any other toxic compounds not listed below shall require the permit holder to submit to the District for review a risk analysis. The risk analysis shall be submitted to the District within 30 days of the results of the characterization and be referenced to this application number.
    Unabated concentrations:

    Benzene = 0.8 ppmv
    Trichloroethylene = 1.2 ppmv
    Perchloroethylene = 2 ppmv
    Methylene Chloride = 2 ppmv

12. Daily records shall be maintained, in a District approved logbook, of the amount of landfill and natural gas burned in the engines. The logbook shall be kept on site for at least two years from the date the data is recorded, and shall be made available to the District staff for inspection.
13. In accordance with the provisions of Regulation 2, Rule 4, should the facility precursor organic compound (POC) or nitrogen oxides (NO_X) emissions ever equal or exceed 50 tons per year, on a pollutant specific basis, the facility owner/operator shall reimburse the District with emission reduction credits for all offsets of that pollutant provided from the District Small Facility Banking Account or its predecessor, the Small Facility Bank.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

RECEIVED

August 23, 1994

1994 SEP -6 P 3:54

SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

Sonoma County, Department of Public Works
575 Administration Dr., Room 117A
Santa Rosa, CA 95403

COPY:
50-01-17.10
Ken Wells
RICH DOIBLE
CHARLIE MAHOU
JIM KENNELLY

Attention: Alex Sebastian

Application Number: 13313
Equipment Location:
500 Meacham Road
Petaluma, CA 94952

Dear Applicant:

This letter is to advise you that your application for changes in conditions for the following is approved:

S-4	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-5	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-6	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**
S-7	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas.**

We have made necessary changes to our records so that your annual renewal will reflect this change.

Attached please find the new Condition #6117 associated with the above equipment

Please include your application number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh - Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

JAS:DNS:sap

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

S-4 through S-7 (Revised: 8/18/94):

1. Under no circumstances shall raw landfill gas be vented to the atmosphere .
2. The flare shall be operated only when one or more engines are down. An automatically controlled landfill gas valve shall be installed and maintained to insure that landfill gas is immediately made available for flaring to the flare, S-2, when one or more engines are down.
3. The engines S-4 through S-7 shall be fired exclusively on landfill gas.
4. The total combined output of the engines, S-4 through S-7, is limited to 39.8755 E+6 hp-hr per consecutive 365 day period.
5. District approved flowmeters, to measure landfill gas flow into the engine, shall be installed prior to any operation and maintained in good working condition.
6. NOX emissions, calculated as NO2, from S-4 through S-7 shall not exceed 1.0 gram/hp-hr.
7. CO emissions from S-4 through S-7 shall not exceed 2.1 grams/ hp-hr.
8. POC emissions from S-4 through S-7 shall not exceed 0.563 gram/hp-hr.
9. A source test shall be performed on any one of the engines S-4 through S-7 within 60 days of start-up to demonstrate compliance with conditions 6, 7, and 8. Such source test shall be performed annually thereafter. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures. They shall be notified at least 10 days in advance of each source test. The source test report shall be submitted to the Source Test Section for their approval, with a copy being sent to the Permit Services Division within 30 days of the test date.
10. A characterization of the landfill gas shall be performed concurrently with each source test. The landfill gas sample shall be drawn from the main landfill gas header. The landfill gas characterization shall be performed in accordance with current California Air Resources Board testing guidelines for Calderon specified air contaminants, total chlorinated compounds, methane, POC, CO2, O2, and N2. The results of this characterization shall be submitted to the District within 60 days of start-up. Thereafter, a landfill characterization for the Calderon specified air contaminants shall be performed annually and the data shall be submitted to the District within 30 days of the testing.
11. Any landfill gas characterization from the engine header which indicates the presence of toxic compounds in excess of the following unabated concentrations and presence of any other toxic compounds not listed below shall require the permit holder to submit to the District for review a risk analysis. The risk analysis shall be submitted to the District within 30 days of the results of the characterization and be referenced to this application number.
    Unabated concentrations:

Benzene = 0.8 ppmv
Trichloroethylene = 1.2 ppmv
Perchloroethylene = 2 ppmv
Methylene Chloride = 2 ppmv

22. Daily records shall be maintained, in a District approved logbook, of the amount of landfill gas burned in the engines. The logbook shall be kept on site and shall be made available to the District staff upon request.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

RECEIVED

September 28, 1993

1993 OCT -1 P 1:16

COPY SENT TO: BER DUENA RUIT DUELE PERMITS BIND

Sonoma County Department of Public Works
575 Administration Drive Room #117A
Santa Rosa, CA 95401

SONOMA COUNTY DEPT. OF PUBLIC WORKS.

Attention: Alex Sebastian

Application Number: 10448
Equipment Location:
500 Meacham Road
Cotati, CA

PHASE IV
(1ST TIER
HORIZONTAL COLLECTOR

Gentlemen:

Attached is your Permit to Operate the following:

S-1 Landfill Gas Collection System consisting of 47 vertical wells, 4700 linear feet of perforated collector placed in refuse, and 3000 linear feet of collection piping.

SEE ATTACHED CONDITIONS #4044

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A. Swanson
Permit Services Division

JAS:DS:me-r
Attachments

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 10448

PLANT No. 2254

SOURCE No. 1

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

Landfill Gas Collection System consisting of 47 vertical wells, 4700 linear feet of perforated collector placed in refuse, and 3000 linear feet of collection piping

LOCATED AT: 500 Meacham Road
Cotati, CA

CONDITIONS: ☑ YES ☐ NO *(All permit conditions must be complied with at all times *)*

If YES, See Attached *Condition No.* #4044

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

Date September 28, 1993

By John R Swanson
Permit Services Division

EXPIRATION DATE June 1, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

50-01-17.10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

June 15, 1993

'93 JUN 22 A 11:44
SONOMA COUNTY DEPT. OF PUBLIC WORKS.

Ken Wells
Sonoma County Department of Public Works
Central Landfill
575 Administration Drive, Room 117A
Santa Rosa, CA 95403

Application Number: *11167*
Equipment Location:
500 Meacham Road
Petaluma, Ca

Gentlemen:

Attached is your Permit to Operate the following:

S-8 **Solid Waste Landfill Operation, abated by A-8, Water Spray**

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II, at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

JAS:DNS:es
Attachment

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

RECYCLED PAPER

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 11167

PLANT NO. 2254

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 8

Solid Waste Landfill Operation
abated by A-8, Water Spray

LOCATED AT: 500 Meacham Road
Petaluma, CA

CONDITIONS: ☒ YES ☐ NO

SEE ATTACHED CONDITIONS (#9670)

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *June 15, 1993*

BY John A Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *June 15, 1994*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

Ci Sergi
Refuse
File

S-8:

1. The landfill shall receive municipal waste in quantities not to exceed the following limits:

   a. 2500 tons per day;
   b. 500,000 tons per consecutive 365 day period.

   Quantities of waste received shall be entered in a District approved log on a daily basis, and totalled to demonstrate compliance with the permit condition. These records shall be kept at the site for at least 24 months from the date the data is entered, and shall be made available to the District staff for inspection.

2. Particulate emissions from any operation of the landfill operations shall be abated by water spray A-8, if necessary, so that visible dust emissions shall not exceed Ringelmann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.

3. If the plant receives two or more Violation Notices from the District for "Public Nuisance" in any consecutive 12 month period, the owner/operator of this plant shall submit to the District within 30 days, an application to modify the Permit to Operate to include the following control measures as applicable or any order that the District deem necessary and appropriate.

   a. The paving of all roads associated with landfill operations.
   b. The use of chemical suppressant to control fugitive dust emissions from roadways associated with this landfill.

→

-8:

1. The landfill shall receive municipal waste in quantities not to exceed the following limits:

   a. 2500 tons per day;
   b. 41,667 tons per consecutive 30 day period. Avg = 1,388.9 T/D

   Quantities of waste received shall be entered in a District approved log on a daily basis, and totalled to demonstrate compliance with the permit condition. These records shall be kept at the site for at least 24 months from the date the data is entered, and shall be made available to the District staff for inspection.

2. Particulate emissions from any operation of the landfill operations shall be abated by water spray A-8, if necessary, so that visible dust emissions shall not exceed Ringelmann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.

3. If the plant receives two or more Violation Notices from the District for "Public Nuisance" in any consecutive 12 month period, the owner/operator of this plant shall submit to the District within 30 days, an application to modify the Permit to Operate to include the following control measures as applicable or any order that the District deem necessary and appropriate.

   a. The paving of all roads associated with landfill operations.
   b. The use of chemical suppressant to control fugitive dust emissions from roadways associated with this landfill.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 2254 Page: 1 Expires: JUN 1, 1994

This document does not permit the holder to violate any District regulation or other law.

Sonoma County Department of Public Works
575 Administrative Dr, Room 117A
Santa Rosa, CA 95403

Location: 500 Meacham Road
Petaluma, CA 94952

S#	DESCRIPTION	[Schedule]	PAID
1	MISC> Landfill with gas collection system, Landfill Sonoma County Central landfill (32 wells total)	[K]	605
2	Industrial Flare - Other (not refinery), 52MM BTU/hr max Landfill Gas Flare	[F]	91

2 Permit Sources, 0 Exempt Sources
Total Fees $696.00
Invoice #12684 Paid

*** See attached Permit Conditions ***

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

Source# 1 subject to condition ID# 4044
Source# 2 subject to condition ID# 1602

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

CONDITION ID #4044

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

CONDITION ID #1602

1. A temperature monitor with readout display and continuous recorder (recording thermocouple) shall be installed and maintained. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion temperature at all times. Temperature charts shall be retained for at least one year and made available at all times for District inspection.
2. The combustion temperature of the flare shall be maintained at a minimum of 1400oF and a residence time of at least 0.3 seconds. These operating conditions are subject to adjustment if source test data demonstrates significant NOx or CO reduction at a different

*** PERMIT CONDITIONS ***

temperature and/or residence time.

3. Under no circumstances shall raw landfill gas be vented to the atmosphere.
4. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.
5. A flow meter to measure gas flow into the flare shall be installed and maintained.
6. The flare shall be equipped with both local and remote alarm systems.
7. If source test data indicates that CO emissions from the flare exceed 550 lb/day, the applicant shall provide modeling as required by Regulation 2-2-306.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~ END OF CONDITIONS ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

** SOURCE EMISSIONS **

PLANT # 2254
Jun 4, 1993

Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	CO
Sonoma County Central landfill (32 wells t	-	399	-	-	-
Landfill Gas Flare	2	2	83	3	21
T O T A L S	2	401	83	3	21

** PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT **

Pollutant Name	Emissions lbs/day
Benzene	1.17
Perchloroethylene (PERC)	7.20
Trichloroethylene	2.08
Vinylidene chloride	.49
Chloroform	.09
Methylene chloride	14.37
Vinyl chloride	1.89

FILE: SO-01-17.10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

June 3, 1993

COPY TO:
SERGIO GONZALES
PERMIT FILE BINDER
BILL OWEN - MCS
BER DOCENA - MCS

Sonoma County Department of Public Works
575 Administration Drive, Room 117A
Santa Rosa, CA 95401

Attention: Alex Sebastian

Application Number: 9344
Equipment Location:
500 Meacham Road
Cotati, CA

Gentlemen:

Attached is your Permit to Operate the following:

S-1 Landfill gas collection system expansion, 22 vertical wells to the existing 25 vertical wells

SEE ATTACHED CONDITIONS #4044

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

JAS:DS:me
Attachments

RECEIVED
1993 JUN -9
SONOMA COUNTY DEPT. OF PUBLIC WORKS

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 9344

PLANT NO. 2254

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 1

Landfill gas collection system expansion, 22 vetical wells to the existing 25 vertical wells

LOCATED AT: 500 Meacham Road
Cotati, CA

CONDITIONS: ☒ YES ☐ NO

SEE ATTACHED CONDITIONS #4044

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE June 3, 1993

BY John A Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: June 3, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

FILE: 50-01-17.10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

July 12, 1993

1993 JUL 14 A 11:09

SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

COPY TO:
SERGIO GONZALES
PERMIT FILE BINDER
BILL OWEN - MCS
BER DOCENA - MCS

Alex Sebastian
Sonoma County Public Works
575 Administration Drive #117A
Santa Rosa, CA 95403

Application Number: *6914*
Equipment Location:
500 Mecham Road
Cotati, CA 94928

Gentlemen:

Attached are your Permits to Operate the following:

S-4	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas**
S-5	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas**
S-6	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas**
S-7	**I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas**

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh, at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A. Swanson
Permit Services Division

JAS:DNS:sap
Attachments

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

RECYCLED PAPER

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 6914

PLANT No. 2254

SOURCE No. 4

Sonoma County Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu.in., 8.61 MMBTU/hr, fired by landfill gas

LOCATED AT: 500 Mecham RoadPlant Address

Cotati, CA 94928

CONDITIONS: ☐ YES ☐ NO *(All permit conditions must be complied with at all times *)*

If YES, See Attached *Condition No.* 6117

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

Date July 12, 1993

By J. A. Swanson
Permit Services Division

EXPIRATION DATE July 12, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 6914

PLANT No. 2254

SOURCE No. 5

Sonoma County Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas

LOCATED AT: 500 Mecham Road
Cotati, CA 94928

CONDITIONS: ☐ YES ☐ NO *(All permit conditions must be complied with at all times *)*

If YES, See Attached *Condition No.* 6117

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

Date July 12, 1993

By John A Swanson
Permit Services Division

EXPIRATION DATE July 12, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 6914

PLANT No. 2254

SOURCE No. 6

Sonoma County Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. inc 8.61 MMBTU/hr, fired by landfill gas

LOCATED AT: 500 Mecham Road

Cot ti, CA 94928

CONDITIONS: ☐ YES ☐ NO *(All permit conditions must be complied with at all times *)*

If YES, See Attached *Condition No.* 6117

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

Date July 12, 1993

By John A Swanson
Permit Services Division

EXPIRATION DATE July 12, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 6914

PLANT No. 2254

SOURCE No. 7

Sonoma County Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

I.C. Engine-Generator, Caterpillar 3516 S.I.T.A., 1138 hp, 4210 cu. in., 8.61 MMBTU/hr, fired by landfill gas

LOCATED AT: 500 Mecham Road
Cotati, CA 94928

CONDITIONS: ☐ YES ☐ NO *(All permit conditions must be complied with at all times *)*

If YES, See Attached *Condition No.* 6117

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

Date July 12, 1993

By John A. Swanson
Permit Services Division

EXPIRATION DATE July 12, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

S-4 through S-7

1. Under no circumstances shall raw landfill gas be vented to the atmosphere .
2. The flare shall be operated only when one or more engines are down. An automatically controlled landfill gas valve shall be installed and maintained to insure that landfill gas is immediately made available for flaring to the flare, S-2, when one or more engines are down.
3. The engines S-4 through S-7 shall be fired exclusively on landfill gas.
4. The operation of the engines S-4 through S-7 is limited to a total combined 36,161,100 hp-hr per consecutive 365 day period.
5. District approved flowmeters, to measure landfill gas flow into the engine, shall be installed prior to any operation and maintained in good working condition.
6. NOX emissions, calculated as NO2, from S-4 through S-7 shall not exceed 1.0 gram/hp-hr.
7. CO emissions from S-4 through S-7 shall not exceed 2.1 grams/ hp-hr.
8. POC emissions from S-4 through S-7 shall not exceed 0.563 gram/hp-hr.
9. A source test shall be performed on any one of the engines S-4 through S-7 within 60 days of start-up to demonstrate compliance with conditions 6, 7, and 8. Such source test shall be performed annually thereafter. The Source Test Section of the District shall be contacted to obtain their approval of the source test procedures. They shall be notified at least 10 days in advance of each source test. The source test report shall be submitted to the Source Test Section for their approval, with a copy being sent to the Permit Services Division within 30 days of the test date.
10. A characterization of the landfill gas shall be performed concurrently with each source test. The landfill gas sample shall be drawn from the main landfill gas header. The landfill gas characterization shall be performed in accordance with current California Air Resources Board testing guidelines for Calderon specified air contaminants, total chlorinated compounds, methane, POC, CO2, O2, and N2. The results of this characterization shall be submitted to the District within 60 days of start-up. Thereafter, a landfill characterization for the Calderon specified air contaminants shall be performed annually and the data shall be submitted to the District within 30 days of the testing.
11. Any landfill gas characterization from the engine header which indicate the presence of toxic compounds in excess of the following unabated concentrations and presence of any other toxic compounds not listed below shall require the permit holder to submit to the District for review a risk analysis. The risk analysis shall be submitted to the District within 30 days of the results of the characterization and be referenced to this application number. Unabated concentrations:

Benzene = 0.8 ppmv = 500 ppb
Trichloroethylene = 1.2 ppmv 1200 ppb
Perchloroethylene = 2 ppmv 2000 ppb

12. Daily records shall be maintained, in a District approved logbook, for the hours of operation & hp-hr of each of the engines, and landfill gas amount flowed through the engines. The logbook shall be kept on site and shall be made available to the District staff upon request.
13. The facility-wide NOX emissions (calculated as NO2) are limited to 39.82 tons per year (tpy). Any relaxation of this condition (i.e.> 40 tpy of NOX) will trigger Prevention of Significant Deterioration modeling for NOX in accordance with District Regulation 2-2-304.2.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

LAMEDA COUNTY
dward R. Campbell
Loni Hancock
Greg Harper
Frank H. Ogawa

TRA COSTA COUNTY
Paul L. Cooper
nne Wright McPeak
Tom Powers

MARIN COUNTY
Al Aramburu

APA COUNTY
Paul Battisti
(Secretary)

FRANCISCO COUNTY
Roberta Achtenberg
Harry G. Britt

AN MATEO COUNTY
Anna Eshoo
(Chairperson)
Janet Fogarty

NTA CLARA COUNTY
Marge Bruno
Rod Diridon
Joe Head
Dianne McKenna

COUNTY
Davis

SONOMA COUNTY
Jim Harberson
Patricia Hilligoss
(Vice-Chairperson)

January 7, 1993

Joan Jett
Empire Waste Management
3400 Standish Avenue
Santa Rosa, CA 95407

Application Number: *9341*
Equipment Location:
500 Meacham Road
Cotati, CA 94928

Gentlemen:

Attached are your Permits to Operate the following:

S-1	**Tub grinder for wood driven by a diesel engine, Fuel Harvester Model 3408, 503 hp, 1099 cu.in., abated by A-1.**
S-2	**Wood debris stockpile and associated activities abated by A-2.**
S-3	**Screen abated by A-1.**
S-4	**Conveyor belt and load out operation abated by A-1.**
A-1	**Misting nozzles/device.**
A-2	**Water spray**

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

EXEMPTION: Diesel engine of S-1 is excluded from District Regulations per Section 1-110.2.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by J. L. A. Swanson
Permit Services Division

JAS:DNS:sap
Attachments

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

RECYCLED PAPER

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 9341

PLANT NO. 7957

Empire Waste Management

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 1

Tub grinder for wood driven by a diesel engine, Fuel Harvester Model 3408, 503 hp, 1099 cu.in., abated by A-1.

LOCATED AT: 500 Meacham Road
Cotati, CA 94928

CONDITIONS: ☒ YES ☐ NO

Please See Attached Conditions #8605

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *January 7, 1993*

BY John A Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *January 7, 1994*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 9341

PLANT NO. 7957

Empire Waste Management

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 2

Wood debris stockpile and associated activities abated by A-2 Water Spray

LOCATED AT: 500 Meacham Road
Cotati, CA 94928

CONDITIONS: ☒ YES ☐ NO

Please See Attached Conditions #8605

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *January 7, 1993*

BY John A. Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *January 7, 1994*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 9341

PLANT NO. 7957

Empire Waste Management

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 3

Screen abated by A-1 Misting nozzles/device

LOCATED AT: 500 Meacham Road
Cotati, CA 94928

CONDITIONS: ☒ YES ☐ NO

Please See Attached Conditions #8605

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *January 7, 1993*

BY John A. Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *January 7, 1994*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

03

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 9341

PLANT NO. 7957

Empire Waste Management

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 4

Conveyor belt and load out operation abated by A-1 Misting nozzles/device

LOCATED AT: 500 Meacham Road
Cotati, CA 94928

CONDITIONS: ☒ YES ☐ NO

Please See Attached Conditions #8605

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *January 7, 1993*

BY John A. Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *January 7, 1994*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

PERMIT CONDITIONS

1. The tub grinder, S-1, shall not operate for more than 8 hours during any calender day nor for more than 2040 hours during any consecutive 12 month period.

2. In order to demonstrate compliance with condition #1, the owner/operator of S-1 shall keep a dated record of the hours of operationin a District approved logbook. Hours of operation shall be totalled on a monthly basis and shall be made available to the District staff for inspection.

3. The tub grinder, S-1, shall be abated by A-1, Misting nozzles/device at all times during operation.

4. The wood unloading, stockpiling, S-2, the screen, S-3, and load out operation, S-4, shall be abated as necessary by A-2, water spray to prevent visible emissions. Dry, dusty material shall be wetted down before unloading from truck beds as necessary to prevent visible emissions.

5. All roadways associated with this plant shall be maintained in a clean or wetted condition as necessary to prevent visible dust emissions.

6. Visible dust emissions from any operation of this plant shall not exceed Ringelmann 0.5 or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301.

7. If the plant receives two or more Violation Notices from the District for "Public Nuisance" in any consecutive 12 month period, the owner/operator of this plant shall submit to the District within 30 days, an application to modify the Permit to Operate to include the following control measures as applicable or any order that the District deem necessary and appropriate.

   a. Enclosure of the tub grinder, S-1.
   b. Complete enclosure of all operations in a warehouse-like building.
   c. The paving of all roadways associated with this plant.
   d. The use of a chemical suppressant to control fugitive dust emissions from roadways associated with this plant.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

RECEIVED

June 9, 1993 11 A 8:04

SONOMA COUNTY DEPT. OF PUBLIC WORKS.

Alex Sebastian
Sonoma County Department of Public Works
575 Administration Dr., Room 117A
Santa Rosa, CA 95401

Application Number: *10448*
Equipment Location:
500 Meacham Road
Cotati, CA 94928

Gentlemen:

This is your Authority to Construct the following:

S-1 **Landfill gas collection system expansion, consisting of 4700 linear feet of perforated collector placed in refuse, and 3000 linear feet of collection piping, to the existing 47 vertical wells.**

Operation of this equipment will be subject to the attached specific conditions.

Please See Attached Condition #4044

Notification

Please notify the District by letter at least **three days** before the initial operation of the equipment is to take place so that we may observe the equipment in operation and verify conformance with the Authority to Construct. Operation includes any **start-up** of the source for testing or other purposes. Operation of equipment without prior written notification to the District or beyond the start-up period without a Permit to Operate may result in enforcement action.

Start-Up Period

After receipt of the start-up letter required above, this Authority to Construct authorizes operation during the start-up period from the date of initial operation noted in your start-up letter until the Permit to Operate is issued, up to a maximum of 60 days. **All conditions (specific or implied) of the Authority to Construct are in effect during the start-up period.**

Fees

District Regulation 3 requires a fee for each new Permit to Operate. You will be invoiced upon receipt of your start-up letter. No permits will be issued until all outstanding fees are paid.

Implied Conditions

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities, and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled, may be made.

Expiration

In accordance with Regulation 2-1-407, this Authority to Construct expires two years from the date of issuance unless substantial use of the authority has begun.

Correspondence

Please include your application number with any correspondence with the District regarding this matter. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by _____
Permit Services Division

JAS:DNS:sap

1. Under no circumstances shall raw landfill gas be vented the atmosphere.

Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.

3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.

4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.

5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

SO-00-17.10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

lant# 2254 Page: 1 Expires: JUN 1, 1993

document does not permit the holder to violate any District regulation or other law.

Sonoma County Department of Public Works
575 Administrative Dr
Santa Rosa, CA 95401

COPY SENT TO:
Ed Hayes
575 Administration Dr
Santa Rosa, CA 95401

3

ation: 500 Meacham Road
Cotati, CA 94928

DESCRIPTION	[Schedule]	PAID
CHEM/MISC> Landfill, Landfill Sonoma County Central landfill (32 wells total)	[K]	605
Industrial Flare - Other (not refinery), 52MM BTU/hr max Landfill Gas Flare	[F]	91

2 Permit Sources, 0 Exempt Sources
Total Fees $696.00
Invoice #32045 Paid

*** See attached Permit Conditions ***

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

is document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

Source# 1 subject to condition ID# 4044
Source# 2 subject to condition ID# 1602

*** PERMIT CONDITIONS ***

CONDITION ID #4044

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

CONDITION ID #1602

1. A temperature monitor with readout display and continuous recorder (recording thermocouple) shall be installed and maintained. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion temperature at all times. Temperature charts shall be retained for at least one year and made available at all times for District inspection.
2. The combustion temperature of the flare shall be maintained at a minimum of 1400oF and a residence time of at least 0.3 seconds. These operating conditions are subject to adjustment if source test data demonstrates significant NOx or CO reduction at a different

*** PERMIT CONDITIONS ***

temperature and/or residence time.

3. Under no circumstances shall raw landfill gas be vented to the atmosphere.
4. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.
5. A flow meter to measure gas flow into the flare shall be installed and maintained.
6. The flare shall be equipped with both local and remote alarm systems.
7. If source test data indicates that CO emissions from the flare exceed 550 lb/day, the applicant shall provide modeling as required by Regulation 2-2-306.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~ END OF CONDITIONS ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

BAY AREA AIR QUALITY
MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 2254 Page: 1 Expires: JUN 1, 1992

This document does not permit the holder to violate any District regulation or other law.

Sonoma County Department of Public Works
575 Administrative Dr
Santa Rosa, CA 95401

COPY SENT TO:
Ed Hayes
575 Administration Dr
Santa Rosa, CA 95401

Location: 500 Meacham Road
Cotati, CA 94928

S#	DESCRIPTION	[Schedule]	PAID
1	CHEM/MISC> Landfill, Landfill gas, 147 thou cubic feet/hr max Sonoma County Central landfill (32 wells total)	[K]	550
2	Industrial Flare - Other (not refinery), 52MM BTU/hr max Landfill Gas Flare	[F]	82

2 Permit Sources, 0 Exempt Sources
Total Fees $632.00
Invoice #18483 Paid

*** See attached Permit Conditions ***

BAY AREA AIR QUALITY
MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

Source# 1 subject to condition ID# 4044
Source# 2 subject to condition ID# 1602

his document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

CONDITION ID #4044

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5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

CONDITION ID #1602

1. A temperature monitor with readout display and continuous recorder (recording thermocouple) shall be installed and maintained. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion temperature at all times. Temperature charts shall be retained for at least one year and made available at all times for District inspection.
2. The combustion temperature of the flare shall be maintained at a minimum of 1400oF and a residence time of at least 0.3 seconds. These operating conditions are subject to adjustment if source test data demonstrates significant NOx or CO reduction at a different

his document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

temperature and/or residence time.

3. Under no circumstances shall raw landfill gas be vented to the atmosphere.
4. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.
5. A flow meter to measure gas flow into the flare shall be installed and maintained.
6. The flare shall be equipped with both local and remote alarm systems.
7. If source test data indicates that CO emissions from the flare exceed 550 lb/day, the applicant shall provide modeling as required by Regulation 2-2-306.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~ END OF CONDITIONS ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

** SOURCE EMISSIONS **

PLANT # 2254
May 9, 1991

Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	C
Sonoma County Central landfill (32 wells t	-	278	-	-	-
Landfill Gas Flare	4	7	180	1	45
T O T A L S	4	285	180	1	45

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

A COUNTY
ard R. Campbell
Loni Hancock
Greg Harper
rank H. Ogawa

RA COSTA COUNTY
Paul L. Cooper
ne Wright McPeak
Tom Powers

ARIN COUNTY
Al Aramburu

APA COUNTY
Paul Battisti
(Secretary)

RANCISCO COUNTY
berta Achtenberg
Harry G. Britt

MATEO COUNTY
Anna Eshoo
(Chairperson)
Janet Fogarty

A CLARA COUNTY
Marge Bruno
Rod Diridon
Joe Head
ianne McKenna

LANO COUNTY
Osby Davis

A COUNTY
arberson
a Hilligoss
ce-Chairperson)

1993 FEB -8 P 4:50

February 5, 1993

SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

Alex Sebastian
Sonoma County Department of Public Works
575 Administration Drive, Room 117A
Santa Rosa, CA 95401

cc:
Ken Wells
Levi Gurule
John Sciborski
Sheryl Bratton
Don Wilson
AMS
2-9-93

Application Number: *9344*
Equipment Location:
500 Meacham Road
Cotati, CA 94928

Gentlemen:

This is your Authority to Construct the following:

S-1 Landfill gas collection system expansion, 22 vertical wells to the existing 25 vertical wells.

Operation of this equipment will be subject to the attached specific conditions:

SEE CONDITION NUMBER 4044

Notification

Please notify the District by letter at least **three days** before the initial operation of the equipment is to take place so that we may observe the equipment in operation and verify conformance with the Authority to Construct. Operation includes any **start-up** of the source for testing or other purposes. Operation of equipment without prior written notification to the District or beyond the start-up period without a Permit to Operate may result in enforcement action.

Start-Up Period

After receipt of the start-up letter required above, this Authority to Construct authorizes operation during the start-up period from the date of initial operation noted in your start-up letter until the Permit to Operate is issued, up to a maximum of 60 days. **All conditions (specific or implied) of the Authority to Construct are in effect during the start-up period.**

Fees

District Regulation 3 requires a fee for each new Permit to Operate. You will be invoiced upon receipt of your start-up letter. No permits will be issued until all outstanding fees are paid.

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

RECYCLED PAPER

Implied Conditions

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities, and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled, may be made.

Expiration

In accordance with Regulation 2-1-407, this Authority to Construct expires two years from the date of issuance unless substantial use of the authority has begun.

Correspondence

Please include your application number with any correspondence with the District regarding this matter. If you have any questions on this matter, please call **Dharam Singh, Air Quality Engineer II at (415) 749-4714.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

JAS:DNS:myl

1. Under no circumstances shall raw landfill gas be vented to the atmosphere.
2. Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.
3. Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.
4. Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.
5. If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.

Area Air Quality
agement District

** SOURCE EMISSIONS **

PLANT # 2254
May 20, 1992

Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	CO
Sonoma County Central landfill (32 wells t	-	513	-	-	-
Landfill Gas Flare	5	4	222	1	56
T O T A L S	5	517	222	1	56

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

AMEDA COUNTY
ward R. Campbell
irley J. Campbell
Loni Hancock
Frank H. Ogawa

RA COSTA COUNTY
Paul L. Cooper
ice Chairperson)
ne Wright McPeak
Tom Powers

IARIN COUNTY
Al Aramburu

NAPA COUNTY
Bob White

RANCISCO COUNTY
Harry G. Britt
Jim Gonzalez

MATEO COUNTY
us J. Nicolopulos
Anna Eshoo
(Secretary)

TA CLARA COUNTY
Martha Clevenger
Rod Diridon
berta H. Hughan
Susanne Wilson

CLANC COUNTY
Cathy Davis
Chairperson

NOMA COUNTY
Jim Harberson
Patricia Hilligoss

FILE: 50-00-17.

December 21, 1990

Ed Haskins
Sonoma Co. Dept. of Public Works
575 Administration Drive
Santa Rosa, CA 95401

Application Number: *2846*
Equipment Location:
500 Meacham Road
Petaluma, CA

Gentlemen:

Attached is your Permit to Operate the following:

S-1 Landfill Gas Collection System, Modification to add 12 additional vertical wells

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Craig Ullery, Air Quality Engineer II at (415)771-6000, extension 261.**

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A. Swanson
Permit Services Division

JAS:CSU:es
Attachment

939 ELLIS STREET • SAN FRANCISCO, CALIFORNIA 94109 • (415) 771-6000 • FAX (415) 928-8560

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 2846

PLANT NO. 2254

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 1

Landfill Gas Collection System,
modification to add 12 additional vertical wells

LOCATED AT: 500 Meacham Road
Petaluma, CA

CONDITIONS: ☑ YES ☐ NO

1. *Under no circumstances shall raw landfill gas be vented to the atmosphere.*

2. *Wells shall not be disconnected or removed from operation nor shall isolation or adjustment valves be closed in excess of 90 minutes, without written authorization from the District.*

3. *Routine maintenance or repairs may be performed without written authorization from the District, provided that only one well is disconnected at any time for a period not to exceed 90 minutes.*

4. *Prior to increasing the number of landfill gas wells, written approval shall be obtained from the APCO.*

5. *If any component of the gas collection or control system breaks down, the District's Enforcement Division shall be notified immediately. Periods of downtime in excess of 24 hours duration shall require an application for a variance to be filed on the following business day with the District's Hearing Board.*

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE *December 21, 1990*

BY John C. Swanson
PERMIT SERVICES DIVISION

EXPIRATION DATE: *December 21, 1991*

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

ALAMEDA COUNTY
Edward R. Campbell
Shirley J. Campbell
Chuck Corica
Frank H. Ogawa

CONTRA COSTA COUNTY
Paul L. Cooper
Sunne Wright McPeak

MARIN COUNTY
Al Aramburu
(Chairperson)

NAPA COUNTY
Harold I. Moskowite

SAN FRANCISCO COUNTY
Harry G. Britt
Jim Gonzalez

SAN MATEO COUNTY
Gus J. Nicolopulos
Anna Eshoo

SANTA CLARA COUNTY
Rod Diridon
Ralph P. Doetsch, Sr.
(Vice-Chairperson)
Roberta H. Hughan
Susanne Wilson
(Secretary)

SOLANO COUNTY
Osby Davis

SONOMA COUNTY
Helen B. Rudee

May 24, 1988

Sonoma County Department of Public Works
575 Administration Drive
Santa Rosa, CA. 95401

Attention: Ed Haskins

RECEIVED
1988 MAY 10 A 9:45

Application Number: 031686
Equipment Location:
500 Meacham Road
Cotati, CA. 94928

Gentlemen:

Attached are your Permits to Operate the following:

S-1 **Landfill Gas Collection System consisting of 13 extraction wells.**

S-2 **Gas Flare, Sur-Lite, 1800 SCFM, with automatic temperature controlled air louvers, 54 MMBtu/hr maximum capacity.**

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call Permit Services at (415) 771-6000, extension 261.

DESTROY FILE 5-00-17.10		
ROUTE TO:	INITIAL	RESPOND
Head		
Morelli		
Haskins		
Hayes		
EXEC. SECTY		

Very truly yours,

Milton Feldstein
Air Pollution Control Officer

by John A Swanson
Permit Services Division

CSU:rn
31686PO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE NO. 31686

PLANT NO. 2254

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 1

S-1 Landfill Gas Collection System consisting of 13 extraction w

LOCATED AT: 500 Meacham Road

Cotati, CA. 94928

CONDITIONS: ☒ YES ☐ NO

SEE ATTACHED

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE May 24, 1988

Expiration Date: May 24, 1989

BY John A Swanson
PERMIT SERVICES DIVISION

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

FORM P-103

CONDITIONS

Source 1

1. Under no circumstance shall raw landfill gas be vented to the atmosphere.

2. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.

3. Total chlorinated compounds in the landfill gas shall not exceed 32 ppm_v.

4. Written annual reports shall be submitted to the District 30 days after the permit anniversary date of the amount (in tons) of garbage placed in each uncontrolled portion of the landfill during the 12 months prior to the anniversary date. The report shall be submitted to the Permit Services Division, referenced to the above permit number, and shall include the increase (in feet) in refuse depth, area (in yd^2 and acreage) filled, and compacted in-place density (lb/yd^3) of the garbage filled in the previous 12 months. This information shall be used to re-evaluate the uncontrolled portion of the landfill for compliance with Regulation 8 Rule 34.

BAY AREA AIR QUALITY MANAGEMENT DISTRIC

PERMIT TO OPERATE NO. 31686

PLANT NO. 2254

Sonoma County Department of Public Works

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT: SOURCE NO. 2

S-2 Gas Flare, Zink Thermal Oxidizing flare with automatic temperature controlled air louvers, 52 MM Btu/Hr maximum capacity.

LOCATED AT: 500 Meacham Road

Cotati, CA. 94928

CONDITIONS: ☑ YES ☐ NO

SEE ATTACHED

MILTON FELDSTEIN
AIR POLLUTION CONTROL OFFICER

DATE May 24, 1988

BY John A Swanson
PERMIT SERVICES DIVISION

Expiration Date: May 24, 1989

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH & SAFETY CODE OF THE STATE OF CALIFORNIA.

2-103

CONDITIONS

Source 2

1. A temperature monitor with readout display and continuous recorder (recording thermocouple) shall be installed and maintained. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flare combustion temperature at all times. Temperature charts shall be retained for at least one year and made available at all times for District inspection.

2. The combustion temperature of the flare shall be maintained at a minimum of $1400^{0}F$ and a residence time of at least 0.3 seconds. These operating conditions are subject to adjustment if source test data demonstrates significant NO_x or CO reduction at a different temperature and/or residence time.

3. Under no circumstance shall raw landfill gas be vented to the atmosphere.

4. If the collection system or the flare exhibit breakdown in excess of 24 hours, a variance from Regulation 8-34 from the District Hearing Board shall be immediately applied for. Two or more breakdowns, each in excess of 24 hours, within a 12 month period, shall require the installation of standby control equipment, such as carbon cannisters or a portable flare.

5. A flow meter to measure gas flow into the flare shall be installed and maintained.

6. The flare shall be equipped with both local and remote alarm systems.

7. If source test data indicates that CO emissions from the flare exceed 550 lb/day, the applicant shall provide modeling as required by Regulation 2-2-306.

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES

Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

March 22, 1996

Mr. Ken Wells
Department of Transportation and Public Works
Integrated Waste Management Division
575 Administration Drive, Room 117A
Santa Rosa, CA. 95403

Re: Central Compost Site, 49-AA-0260

Dear Ken:

The California Integrated Waste Management Board has concurred with the issuance of a Standardized Composting Permit No. 49-AA-0260 for the Central Compost Site. Enclosed is a copy of Permit Decision No. 96-84, dated February 28, 1996, a Notice of Determination posted March 21, 1996 and the permit issued March 21, 1996.

Sincerely,

ROBERT A. SWIFT, R.E.H.S.
Senior Solid Waste Specialist

RAS/mb

RECEIVED
1996 MAR 26 A 10: 12
SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

is notice was posted on MAR 21 1996
d will remain posted for a period of thirty days
til 04/20/1996.

NOTICE OF DETERMINATION FOR RESPONSIBLE AGENCY

This Notice of Determination, prepared pursuant to Section 15096 of the State CEQA guidelines, indicates the action taken by the Sonoma County Department of Health Services on the project described below.

Project Title: Issuance of standardized permit for Central Disposal Site Compost Facility
Project Location/Address APN: 500 Meacham Road, Petaluma
Lead Agency: County of Sonoma
Responsible Agency: Sonoma County Department of Health Services
Decision Making Body: Sonoma County Department of Health Services, Local Enforcement Agency
Date of Approval: March 21, 1996
Project Applicant: Sonoma County Department of Transportation and Public Works
State Clearinghouse Number: 92013077

Project Description: The Sonoma County Department of Health Services will issue a standardized permit for continued operation of an existing compost facility located at the Sonoma County Central Disposal Site. The County of Sonoma, as Lead Agency, adopted a Negative Declaration for this facility in 1992 and constructed the facility in 1993.

This is to advise that the Sonoma County Department of Health Services, as a Responsible Agency under CEQA, has determined to issue a standardized permit for the compost facility, and has made the following determinations:

1. The County of Sonoma, as Lead Agency, prepared a Negative Declaration for the compost facility.
2. The Sonoma County Department of Health Services, acting under the authority of the State of California as the Local Enforcement Agency and a Responsible Agency under CEQA, considered the Negative Declaration prepared by the County of Sonoma.
3. The project was found to have no significant effect on the environment.
4. The Sonoma County Department of Health Services added minor technical information to the Negative Declaration. This information did not constitute important new information that would require new environmental analysis, and did not change any conclusions reached in the original Negative Declaration.
5. Mitigation measures were not made a condition of the approval of the project.

California Integrated Waste Management Board
Permit Decision No. 96-84
February 27, 1996

WHEREAS, Sonoma County Department of Transportation and Public Works proposes to operate a green waste composting facility on 35 acres (25 acres for the composting area and 10 acres for the processing area) of intermediate cover area of the Central Disposal Site under a Standardized Permit; and

WHEREAS, Sonoma County Public Works Department (County), the lead agency, prepared a Negative Declaration (ND), SCH #9201377, for the proposed project. The document was approved by the lead agency on March 24, 1992, and a Notice of Determination was filed on May 11, 1992; and

WHEREAS, the LEA, in consultation with Board Staff, prepared and submitted an addendum to the ND on January 30, 1996; and

WHEREAS, Board staff reviewed the ND, response to comments, and addendum for the proposed project, and determined that the CEQA document is adequate for the Board's evaluation of the proposed project for those project activities which are within this Agency's expertise and/or powers or which required to be carried out or approved by the Board; and

WHEREAS, the design capacity is 36,000 cubic yards of active compost on-site at any one time; and

WHEREAS, Sonoma County Department of Health Services, acting as the Local Enforcement Agency, has submitted to the Board for its review and concurrence in, or objection to, a new Standardized Permit for the Central Compost Site; and

WHEREAS, the proposed permit is consistent with the project description in the CEQA document; and

WHEREAS, the Board finds that all state and local requirements for the proposed permit have been met, including consistency with Board standards, conformance with the County Integrated Waste Management Plan, and compliance with CEQA; and

WHEREAS, LEA and Board staff have evaluated the application and proposed permit and determined that the facility will be able to operate in compliance with the applicable State Minimum Standards and standardized permit terms and conditions.

NOW, THEREFORE, BE IT RESOLVED that the California Integrated Waste Management Board concurs in the issuance of Solid Waste Facility Permit No. 49-AA-0260.

CERTIFICATION

The undersigned Executive Director of the California Integrated Waste Management Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the California Integrated Waste Management Board held on February 27, 1996.

Dated: FEB 28 1996

Ralph E. Chandler
Executive Director

State of California
CIWMB FORM 5000 (revised 2/95)

California Integrated Waste Management Board

STANDARDIZED COMPOSTING PERMIT

1. Facility/Permit Number (SWIS): 49-AA-0260

2. Name of Facility: Central Compost Site

Address/Location: 500 Mecham Road, Petaluma, CA 94952

3. Local Enforcement Agency: Sonoma County Department of Health Services: Environmental Health Division

Address: 1030 Center Dr., Suite A, Santa Rosa, CA 95403

4. Signature of Local Enforcement Agency Approving Officer:

5. Please Print or Type Name and Title of Approving Officer: Robert A. Swift, Senior Solid Waste Specialist

6. Date of Signature: 1/25/96

7. Date Received by CIWMB: JAN 25 1996

8. Signature of CIWMB Approving Officer: Dorothy Rice

9. Please Print or Type Name and Title of Approving Officer: Dorothy Rice, Chief Deputy

10. Date of Signature: 3-7-96

11. Date of Permit Issuance: 3/21/96

12. Permit Review Due Date: 3/21/2001

The facility for which this permit has been issued shall only be operated in accordance with the description provided in the application pursuant to Section 18105.1 and Report of Composting Site Information pursuant to Section 17863.

13. Legal Description of Facility: (description may be attached)

Legal description attached

14. Findings:

a. This permit is consistent with standards adopted by the California Integrated Waste Management Board pursuant to Public Resources Code Section 44010.

b. [X] An environmental determination (i.e., Notice of Determination), has been filed with the State Clearing House (# 92013077) for all facilities that are not exempt from CEQA and documents pursuant to Public Resources Code Section 21081.6.

c. [X] The following authorized agent Sonoma County Permits and Resource Management has made the determination that the facility is consistent with the applicable general plan, as required by Public Resources Code, Section 50000.5(a).

d. [X] The operation of this facility is consistent with the [ ] County Solid Waste Management Plan (50000), or the [X] County Integrated Waste Management Plan (50001).

e. The design of the proposed facility or the design and operation of an existing facility, as appropriate, is in compliance with State Minimum Standards for Composting Operations Regulatory Requirements, Title 14, Division 7, Chapter 3.1 (commencing with Section 17850) of the California Code of Regulations.

f. Public Resources Code Section 44009 has been complied with.

15. In addition to this permit, the facility may have one or more of the following permits or restrictions on its operations. Persons seeking information regarding these items should contact the appropriate regulatory agency.

Report of Composting Site Information (January 1996)
State Water Resources Control Board/Regional Water Quality Control Board Waste Discharge
Requirements or Waiver Monitoring and Reporting Program No 93-77 (July 13, 1993)
National Pollutant Discharge Elimination System (Stormwater) Permit
Fire Protection District Findings (August 13, 1991)
Mitigation and Monitoring Measures (pursuant to the California Environmental Quality Act)
Conditional Use Permit Sonoma County Dept. of Planning (September 16, 1991)
California Environmental Quality Act Environmental Impact Report or Negative Declaration SCH #92013077 (January, 1992)
Air Pollution Permits and Variances #9341 (January 7, 1994)
Coastal Commission Restrictions

16. Terms and Conditions:

a. The operator shall comply with applicable state minimum standards set forth in Title 14, Division 7, Chapter 3.1 (commencing with Section 17850) of the California Code of Regulations.

b. The operator shall comply with all mitigation and monitoring measures developed in accordance with a certified environmental document filed pursuant to Public Resources Code Section 21081.6.

c. The operator shall maintain a copy of this standardized permit at the facility to be available at all times to facility, enforcement agency, or board personnel.

d. The operator shall maintain and make available for inspection by the enforcement agency and board all correspondence and reports provided to other regulatory agencies that have jurisdiction over the facility.

e. The operator shall be responsible for identifying the types of feedstocks accepted for processing.

f. The design capacity of 36,000 cubic-yards of material undergoing the composting process shall not be exceeded. This requirement does not include on-site storage of feedstock or stabilized compost.

g. Additional clarifying information concerning the design and operation of the composting facility shall be furnished upon written request of the enforcement agency, or the board.

h. The operator shall notify the enforcement agency, in writing, within thirty (30) days of receipt of the test results, of any noncompliance with Sections 17868.2 and 17868.3 of Chapter 3.1, Division 7, Title 14, of the California Code of Regulations.

i. Unless specifically permitted or allowed under Title 14, Division 7, Chapter 3.1 of the California Code of Regulations, the facility shall not accept the following materials:

(1) Designated wastes as defined in Title 23, Chapter 15, Section 2522 of the California Code of Regulations

(2) Hot Ashes/Burning materials

(3) Medical wastes as defined in Section 25023.2 of the Health & Safety Code

(4) Hazardous Wastes as defined in Section 25117 of the Health & Safety Code

(5) Liquid Wastes as defined in Title 23, Chapter 15, Section 2601 of the California Code of Regulations (unless approved by RWQCB and the enforcement agency)

j. The following activities are prohibited:

(1) Scavenging

(2) Salvaging

(3) Discharge of wastes off-site

(4) Vector propagation or harborage

k. The facility, if located outside of a city, shall be maintained in compliance with the flammable clearance provisions, pursuant to Public Resources Code Section 44151.

SEE INSTRUCTIONS ON BACK.

ACILITY NAME: CENTRAL COMPOST SITE

FACILITY PHONE NUMBER: 707) 792-0547

ACILITY ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE): 5[illegible] MECHAM ROAD, PETALUMA, CA 94952

ACILITY OPERATOR'S NAME: SONOMA COUNTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

OPERATOR'S PHONE NUMBER: 707-792-0547

PERATOR'S ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE): 575 ADMINISTRATION DRIVE ROOM 117A SANTA ROSA, CA 95403

ND OWNER'S NAME (IF DIFFERENT FROM OPERATOR): SONOMA COUTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

LAND OWNER'S PHONE NUMBER: 707-527-2231

ND OWNER'S ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE): 575 ADMINISTRATION DRIVE, ROOM 117A, SANTA ROSA, CA 95403

FACILITY INFORMATION

LIFORNIA CODE OF REGULATIONS SECTION NUMBER AUTHORIZING ELIGIBILITY:

PE OF WASTE MATERIAL(S) HANDLED (PLEASE BE SPECIFIC): green waste, wood waste, agricultural waste, grape pomace, liquid winery by-products, creamery liquid

LUME OF WASTE MATERIAL(S) HANDLED: 2,000 tons

E CAPACITY: 36,000 CUBIC YARDS

DAILY PEAK LOADING: 300tpd 900 CUBIC YARDS

ANNUAL LOADING: 71,800 tpy 215,400 CUBIC YARDS

S AND HOURS OF OPERATION: days per week 7:00 a.m. to 4:00 p.m.

25 compost/10 process

UT: 35 ACRES

25 compost/10 process

OPERATING AREA SIZE: 35 ACRES

MING WASTE MATERIAL (NUMBER OF VEHICLES PER DAY): 150

OUTGOING WASTE MATERIAL (NUMBER OF VEHICLES PER DAY): 40

OF THE FOLLOWING STATEMENTS MUST BE CHECKED:

Issuance of the permit will not prevent or substantially impair achievement of the diversion goals of the jurisdiction from which it received solid waste; the facility is identified and described in or conforms with the county solid management waste plan, or otherwise complies with Public Resources Code 50000; The facility is consistent with the city or county general plan and is compatible with surrounding land uses, or otherwise complies with Public Resources Code 50000.1.

X The facility is identified in either the countywide siting element, the nondisposal facility element, or in the source reduction and recycling element for the jurisdictions in which it is located; or, that the facility is not required to be identified in any of these elements pursuant to section 50001 of the public resources code.

APPLICATION MUST BE ACCOMPANIED BY A

PORT OF FACILITY INFORMATION, ☒SITE PLAN, ☒LOCATION MAP, AND EITHER ☒EVIDENCE OF COMPLIANCE WITH CEQA, OR ☐INFORMATION ON THE STATUS OF CEQA

CERTIFICATION

by acknowledge that I have read this application, and certify under penalty of perjury that the information provided is true and accurate. In ting the facility, I agree to comply with the conditions of the permit, and with federal, state and local requirements and enactments.

OWNER'S SIGNATURE: [signature] DATE SIGNED: 1/25/96

TOR'S SIGNATURE: [signature] DATE SIGNED: 1/25/96

ENCY NAME AND ADDRESS: SONOMA COUNTY DEPARTMENT OF HEALTH SERVICES 1030 CENTER DRIVE, SANTA ROSA 9540

FOR ENFORCEMENT AGENCY USE ONLY

ECEIVED:	DATE APPROVED:	DATE REVIEWED:	

Instructions for Completing Standardized Application:

Fill out this application form completely and accurately in duplicate. After the Enforcement Agency (EA) has reviewed application, the EA will determine whether the application meets the requirements of section 18105.1. If the EA finds the application is complete and correct, it shall be accepted for filing. If the application is not found to be complete and correct will be returned. For additional information on the procedure used for processing this application refer to Title 14 of the California Code of Regulations, Section 18105.2 et.seq..

Facility Name: The legal name of the facility.

Facility Address/Location: The address of the facility and a description of the location if different.

Facility Operator/Land Owner: Provide both the mailing address and the location/address where process may be served.

Section Authorizing Eligibility: You must determine the appropriate Section of the Regulations that authorize eligibility. After determining the appropriate section list it on the application.

Type of Waste Material(s) Handled: Indicate the materials handled at the facility.

Site Capacity: Total capacity of material that can be stored at this site.

Daily Peak Loading: Is the largest project projected waste/material quantity to be received by an operation on any day of operation.

Annual Loading: Is the maximum amount of waste/material to be handled by an operation annually.

Traffic: State the maximum number of vehicles that will enter and haul incoming material or remove compost on a daily

The operator is required to supply conformance finding information. Which ever of the two sections is appropriate to your operation must be checked. To make the determination you can contact the Enforcement Agency, Local Task Force, or oth solid waste planning agency in your city or county.

The application must include a site map and a location map. The site map should include, but not be limited to, operations areas and their relationships to property boundaries, adjacent land uses, proposed drainage systems, any excavation areas, and any other portions of the site dedicated to a specific use. The location map should show the general location of the operation at a scale size minimally equivalent to 1:24000 USGS topographical quadrangle.

A Report of Facility Information (RFI) must be included with this application. The RFI must contain all of the information required by the applicable section(s) of Article 3.2, Chapter 5, of 14CCR.

The application must include one of the following: (1) Evidence that there has been compliance with the California Environmental Quality Act, or (2) Information on the status of the application's compliance with the California Environmental Quality Act regarding this facility. Once there has been compliance with the California Environmental Act, evidence shall be submitted to the enforcement agency.

This application must be signed, under penalty of perjury, by both the land owner and the operator.

APPENDIX A-9

Fire Prevention Plan

See Appendix L

APPENDIX A-10

CEQA
AND
CONFORMANCE FINDING
INFORMATION

- Dravo Drilling Mud Disposal Site - Class III dewatered drilling mud disposal site owned and operated by Union Oil Company

- Santa Rosa Geothermal WMU Disposal Site - Class III drilling muds disposal site owned and operated by Cal-Pine Operating Plant Services

None of the privately owned disposal sites in the county accept municipal solid waste, and the Annapolis site is relatively small, servicing a limited segment of the population. Therefore, disposal capacity projections and expansion plans focus solely on the Central Landfill.

2.1 Existing Countywide Disposal Capacity

During the same period that the Source Reduction and Recycling Elements (SRREs) were being prepared, the DPW authorized an independent engineering study to redefine the configuration of the Central Landfill and provide updated estimates of remaining disposal capacity at the site. This study, entitled "Central Landfill Expansion Capacity Study Phase I, August 1992" (1992 Study), was produced by EBA Wastechnologies and is contained in Appendix C-1. The study was completed as part of the DPW's ongoing long-term evaluation of the landfill capacity in the County. Such studies enable DPW to begin planning for new landfill capacity with sufficient time to permit future capacity.

The 1992 Study concluded that as of January 1992, remaining Central Landfill capacity was 11.5 million cubic yards. This is in substantial agreement with DPW estimates of capacity and with an independent study done by Carlenzoli and Associates Consulting Engineers. Therefore, disposal capacity estimates contained in the 1992 Study serve as the new baseline from which to monitor and evaluate waste diversion program effectiveness rather than the data provided in the SRREs, which was based upon reports prepared in 1990 that showed the County had 5.5 million cubic yards capacity (3.3 million tons) remaining at that time. Based upon updated projections contained in the 1992 Study, Sonoma County has sufficient landfill capacity through the short- and medium-term planning periods without changing the existing configuration of the site."

Site life at the Central Landfill was estimated in the 1992 study using three different recycling scenarios and three population growth rates based on: (1) Association of Bay Area Governments (ABAG), (2) California Department of Finance (CDF), and (3) Sum of the County General Plan and Cities General Plans (CGP) projections. The different growth rates resulted in up to 10 months difference in total projected site life of the current permitted landfill capacity. The CDF projection resulted in the shorter remaining site life and the ABAG projection resulted in longer site life. While the growth rate for the unincorporated area is lower than the ABAG growth rate, the sum of the Cities' General Plans and the County's General Plan growth rates is slightly higher than the ABAG growth rate. Site life projections based on the most conservative projections of growth and three different recycling rates are shown below:

- The site will last until February 2004 using the CDF population projection and a steady diversion rate of 17% (existing countywide rate) until 1994, increasing to 25% in 1995 and staying at 25% until 1999, increasing to 50% in 2000 and remaining at 50% after 2000.

- The site would last through March of 2005 using the CDF population projection, assuming the diversion rate increases from the current 17% at two percent per year until 1995 to reach 25%, increases at 5% per year from 1995 to 2000 to reach 50%, and remaining at 50% after 2000.

- The site would last until January 2004 using the CDF population projection, an increasing diversion rate to 25% in 1995, increasing to 40% by 2,000 and staying at 40% after 2000.

2.2 Anticipated Countywide Disposal Capacity Needs

Given the site life projections presented above, the County's basic strategy of providing at least 15 years of disposal capacity from submission of this document in 1994 will require the expansion of existing, and/or the development of new disposal capacity. There are also other possible options. The County has defined six basic expansion options for the Central Landfill. The six expansion scenarios are:

- Lateral expansion into an area known as East Canyon

- Lateral expansion into both the East Canyon and an adjacent parcel known as West Canyon

- Lateral and vertical expansion from a maximum height of 565 feet mean sea level to approximately 720 feet mean sea level into an area known as East Canyon

- Lateral and vertical expansion from a maximum height of 565 feet mean sea level to approximately 720 feet mean sea level in both the East and West Canyons

- Lateral expansion into both the East and West Canyons with the relocation of existing onsite facilities

- Lateral and vertical expansion from a maximum height of 565 feet mean sea level to approximately 720 feet mean sea level in both the East and West Canyons, and relocation of existing onsite facilities

As required in Section 18755.3(c)(3), Tables C-2 and C-3 reflect the anticipated impacts on the amount of disposal capacity available in Sonoma County for a period of 15 years from the date of submission of the Siting Element (1994). Estimated disposal capacity impacts are shown in

Central Landfill Permanent HHW Collection Facility	
Type of Facility	Permanent Household Hazardous Waste (HHW) and Conditionally Exempt Small Quantity Generator (CESQG) Collection Facility
Location	500 Mecham Rd. Petaluma, CA 94952
Participating Jurisdictions	Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, Unincorporated County, Windsor, General Public
Purpose of Facility	To accept hazardous waste from households and CESQGs for reuse, recycling and proper disposal.
Expansion Materials to be Recovered:	New facility - anticipated to begin operations in 2000 All hazardous wastes excluding explosive, radioactive, medical, and water reactive materials.
% of the Regional Agency's Total Waste Stream to be Diverted	< 1%
Capacity	3,360 square foot building able to manage 192 55-gallon drums of labpacked waste, 1,000 gallons of oil and 500 gallons of antifreeze.
Current Land Use	Active landfill
Surrounding Land Use	Agriculture, grazing lands, rural residential
Permit Status	The facility is still in the planning stage. The County has not applied for permit.
Function Within the Regional Agency's Integrated Waste Management System	State law requires that all hazardous waste be banned from disposal in class III landfills including HHW. This facility is being established to offer convenient and regular collection of HHW to provide a necessary alternative to periodic collections or illegal dumping.

Central Landfill/Recycletown	
Type of Facility	Disposal, Reuse and Recycling
Location	500 Mecham Rd. Petaluma, CA 95952
Participating Jurisdictions	Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, Unincorporated County, Windsor, General Public
Purpose of Facility	To divert reusable and recyclable materials from the waste stream and resale of usable materials to ensure their thorough use.
Expansion	The facility will be relocated, though actually space and function will be comparable. A "Z" wall will be built to accommodate thirteen 20 yd bins and one 40 yard bin. No new materials will be added in this expansion.
Material Currently Recovered	Reusables: Wood, building supplies, appliances, clothing, paint, books, bicycles, mattresses, etc. Recyclables: Newspaper, cardboard, magazines, office paper, telephone books, mixed paper, paperboard, glass, aluminum cans, tin/bi-metal cans, aluminum foil, scrap metal, PET bottles, HDPE bottles, appliances, yard waste, wood waste, tires, ceramics, foam/padding, auto batteries, oil, and oil filters.
% of the Regional Agency's Total Waste Stream to be Diverted	<1% 4,380 tons in 1997 (Does not include yard and wood waste.)
Current Land Use	Active landfill
Surrounding Land Use	Agriculture, grazing lands, rural residential
Permit Status	No permit is required for operation of this facility.
Function Within the Regional Agency's Integrated Waste Management System	Recycletown is the prime example of Sonoma County's holistic approach to diversion combining reuse and recycling located at the County's disposal site.

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403
Edward J. Walker, Director

AREA CODE (707)
ROADS 565-2231
TRANSIT 585-7516
REFUSE 565-2231
AIRPORT 524-7243
AIR POLLUTION 433-5911
FAX 565-2620

DEPARTMENT OF
HEALTH SERVICES

NOV 12 1999

ENVIRONMENTAL
HEALTH DIVISION

November 8, 1999

File: 50-01-17.6

Bob Swift
Sonoma County Health Services
Environmental Health Division
1030 Center Drive, Suite A
Santa Rosa, CA 95403

Re: **Transmittal of Resolutions of the Board of Supervisors Central Disposal Site Improvement Program and Central Disposal Rock Extraction Program**

Dear Mr. Swift:

As requested, we are forwarding one copy each of the following:

1. Board of Supervisors Resolution Number 98-1103, Certifying the Final Environmental Impact Report for the Central Disposal Site Rock Extraction Project, dated August 18, 1999.

2. Board of Supervisors Resolution Number 98-1524, Certifying the Final Environmental Impact Report for the Central Disposal Site Improvement Program, dated December 8, 1998.

The County plans to commence rock extraction activities as soon as possible after your approval. If you have any questions, please contact me at (707) 792-4958.

Very truly yours,

EDWARD J. WALKER, DIRECTOR
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Don R. Poindexter, Sr. Civil Engineer

Enclosures: Board of Supervisors - Resolution Number 98-1103,
Resolution Number 98-1524

c: Ed Walker, Ken Wells, Susan Klassen
Terri Kinney, RWQCB, w/encl.

THE WITHIN INSTRUMENT IS A CORRECT COPY OF THE ORIGINAL ON FILE IN THIS OFFICE.

ATTEST: AUG 2 6 1998

EEVE T. LEWIS
County Clerk & ex-officio Clerk of the Board of Supervisors of the State of California, in & for the County of Sonoma.
By _____ Deputy

Resolution Number 98-1103

County of Sonoma
Santa Rosa, California

August 18, 1998
UP94-681/SMP93-570 Scott Briggs

RESOLUTION OF THE BOARD OF SUPERVISORS, COUNTY OF SONOMA, STATE OF CALIFORNIA, CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE CENTRAL DISPOSAL SITE ROCK EXTRACTION PROJECT, MAKING RELATED FINDINGS, APPROVING THE ROCK EXTRACTION SURFACE MINING PERMIT AND RECLAMATION PLAN BY THE DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS, GRANTING A USE PERMIT TO STONY POINT QUARRY AND ADOPTING A MITIGATION MONITORING PROGRAM PROVIDING FOR THE IMPLEMENTATION OF IDENTIFIED MITIGATION MEASURES RELATING TO THE PROJECT.

RESOLVED, by the Board of Supervisors ("Board") of the County of Sonoma that the Board hereby makes the following findings and determinations in connection with the proposed Central Disposal Site Rock Extraction Project and alternatives as more particularly described in the Final Environmental Impact Report ("Final EIR").

I. APPLICATION AND PROPOSED PROJECT

A. The Sonoma County Department of Transportation and Public Works, Integrated Waste Division has submitted to this Board a proposal for (1) a surface mining permit to authorize the excavation and exportation of 700,000± cubic yards (1,050,000 tons) of surplus rock from the Central Disposal Site facility over the course of three to four years, and (2) a reclamation plan which will leave the excavated site in a condition adaptable for later landfill use at the Central Disposal Site, located at 500 Mecham Road, Petaluma (APN 024-080-019); Zoned PF (Public Facilities); Supervisorial District No. 2.

B. The applicant, Stony Point Quarry, has filed a use permit application with the Sonoma County Permit and Resource Management Department for a use permit authorizing Stony Point Quarry to import, process and sell the excavated landfill rock. The excavated site will provide the Central Disposal Site with an estimated eight months of additional landfill capacity during the landfilling phase of this project. The landfill is otherwise expected to close in 2004. The use permit includes provisions to increase the maximum tonnage that Stony Point Quarry may import to include the Central Disposal Site rock and to increase the maximum allowable annual production capacity of the quarry by up to 350,000 tons for up to seven years (not to exceed 1,050,000 tons over the life of the permit) to allow for the importation and sale of the processed rock located at 7171 Stony Point Road, Cotati; APN (024-050-005, 011, and 013); Zoned RRD 40 (Resources and Rural Development, 40 Acre Density); Supervisorial District No 2.

II. PROCEDURAL HISTORY

A. On May 2, 1996 in accordance with the provisions of law, the Planning Commission held public hearings on both projects at which time all interested persons were given an opportunity to be heard.

B. On July 23, 1996, the Board of Supervisors adopted Resolution #96-1024 directing staff to revise the environmental document to incorporate newly discovered information concerning the presence of contaminants in background groundwater monitoring wells at the Central Disposal Site. It was determined that a single Environmental Impact Report would be prepared incorporating all aspects of both the rock excavation and quarry importation components of the project.

C. On May 13, 1997, the Board of Supervisors adopted Resolution #97-0631, assuming original jurisdiction over the project, and thereby shortening project processing time by 2-3 months.

D. A Draft Environmental Impact Report ("Draft EIR") dated November 1997 was prepared following the public hearing held by the Planning Commission and consultation with responsible and trustee agencies and interested persons. A notice of completion of the Draft EIR was filed with the Office of Planning and Research on or about November 14, 1997 bearing State Clearinghouse Number 97022022.

E. The Draft EIR was circulated for public review from November 14, 1997 to January 6, 1998. The state agency review period for written comments on the Draft EIR, as set by the State Clearinghouse, commenced on November 14, 1997 and ended on December 30, 1997. The County received written comments on the Draft EIR during the review period as more particularly set forth in the Response to Comments document.

F. On December 16, 1997 and January 6, 1998 the Board of Supervisors, in accordance with applicable law, conducted duly noticed public hearings on the Draft EIR at which time all interested persons had an opportunity to be heard and were heard. The Board of Supervisors accepted oral testimony on December 16, 1997 and January 6, 1998 and written testimony or comments through January 6, 1998. After the close of the public hearing and comment period on the Draft EIR, the County responded to the oral and written comments that were received, as more particularly set forth in the Response to Comments document.

G. On or about July 20, 1998, the staff of the County Permit and Resource Management Department completed its review of comments received on the Draft EIR dated November 1997, revised the Draft EIR dated November 1997 to adopt suggested changes, and to incorporate comments, together with the County's response to such comments. Thereafter, further amplifications, clarifications and insignificant modifications were made to the Draft EIR dated November 1997, and as so revised, a proposed Final EIR was prepared by the County on July 28, 1998.

H. On August 11, 1998, the Board of Supervisors in public session discussed and considered the proposed Final EIR, including responses to comments, directed staff to make

further insignificant changes, and found that it had been prepared and completed in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance.

III. CERTIFICATION OF THE FINAL EIR

A. The Final EIR for the proposed Central Disposal Site Rock Extraction Project consists of the Draft EIR dated November 1997, the revised Draft EIR dated July 1998, comments and responses to the revised Draft EIR dated July 1998, clarifications, amplifications and insignificant modifications thereto dated July 1998, as further reflected in the Final EIR dated July 1998.

B. The Board hereby finds that the Final EIR has been completed in accordance with all applicable procedural and substantive requirements of CEQA, the State CEQA Guidelines and the County's CEQA Ordinance.

C. The Board finds further that: a. the preparation of the Final EIR represents a good faith effort to achieve completeness and full environmental disclosure; and b. the degree of specificity set forth in the Final EIR corresponds to the degree of specificity appropriate for the proposed Central Disposal Site Rock Extraction Project.

D. The Board certifies that the Final EIR was prepared, publicized, circulated and reviewed in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, and constitutes an adequate, accurate, objective and complete Final EIR in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, for the purpose of approving the Central Disposal Site Rock Extraction Project.

E. The Board finds that the modifications made to the Final EIR after the close of the public comment period but prior to certification of the FEIR in response to comments received do not result in new or more severe adverse effects on the environment not previously disclosed in the Draft EIR. The Board finds that the identification of Traffic Impact and Mitigation Measure Nos. 11 and 12 and optional Water Resources Mitigation Measure No. 6, and the revisions to Water Resources Mitigation Measure Nos. 2 and 5, Traffic Impact and Mitigation Measure Nos. 1, 2 and 4, Noise Mitigation Measure No. 1, Air Quality Mitigation Measure Nos. 1 and 2, Public Health and Safety Impact and Mitigation Measure Nos. 3, 4, 5 and 6, , Cumulative Water Resources Impact and Mitigation Measure D, Cumulative Traffic Impact and Mitigation Measures A, B, C, D and F, Cumulative Noise Impact and Mitigation Measure B, Cumulative Air Quality Mitigation Measure A and Cumulative Public Health and Safety Mitigation Measure C, simply clarify impacts and mitigations which were previously discussed in the DEIR dated November 1997. These revisions generally may be described as consisting of:

a. an expanded discussion of previously identified impacts;

b. an expanded listing of appropriate mitigation measures which generally are of the type previously identified in the DEIR dated November 1997 circulated for public comment; and

c. changes to resolve ambiguities or inconsistencies in the DEIR.

F. None of the revisions constitutes "significant new information" within the meaning of CEQA inasmuch as none discloses:

a. a new substantial environmental impact resulting from the proposed project or from a new mitigation measures proposed to be implemented; and

b. a substantial increase in the severity of an environmental impact that will not be mitigated to a level of insignificance through adopted mitigation measures;

c. a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which is not required by the proposed project; or

d. that the DEIR was so fundamentally and basically inadequate and conclusory in nature that the public comment on the draft was in effect meaningless.

G. All of the above-referenced revisions serve only to clarify or amplify statements contained in the DEIR or otherwise make insignificant changes.

H. For the reasons stated above, and those stated elsewhere in the record, the Board finds that these revisions to the DEIR dated November 1997 do not constitute "significant new information" within the meaning of CEQA so as to trigger recirculation of that DEIR..

I. The Board further finds that none of the purposes of CEQA would be served by additional public comment on the DEIR, but that only needless delay would result.

J. The Board certifies that it has reviewed and considered the information in the Final EIR and finds that it represents the independent judgement of the County and is an adequate informational document, and that it has provided this Board and the public with full and fair disclosure of potential environmental impacts associated with the project. The Board has considered the Final EIR prior to making its final decision on the merits of the project.

IV. MITIGABLE SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS AND NECESSARY MITIGATION MEASURES

A. The Board of Supervisors finds that the proposed Central Disposal Site Rock Extraction Project poses certain significant or potentially significant adverse environmental impacts, which are fully and accurately summarized in Exhibit A attached hereto, incorporated herein by this reference and more fully described in the Final EIR. The Board further finds that changes or alterations have been required in or incorporated into the proposed Central Disposal

Site Rock Extraction Project that will mitigate those impacts to less than significant levels as set forth in Exhibit A attached hereto and incorporated herein by this reference. Based on such findings, and the above statement of facts, the Board hereby finds that the significant adverse environmental impacts posed by the proposed Central Disposal Site Rock Extraction Project and set forth in Exhibit A have been eliminated or substantially lessened.

V. UNMITIGABLE ADVERSE ENVIRONMENTAL IMPACTS

A. The Final EIR disclosed significant or potentially significant environmental impacts that may not, or cannot, be avoided if the project is approved as summarized in Exhibit B attached hereto and incorporated herein by this reference.

VI. ALTERNATIVES

A. The Board finds that the Final EIR describes a range of reasonable alternatives. However, the alternatives described in the Final EIR cannot feasibly achieve certain objectives of the project as more particularly described in Exhibit C attached hereto and incorporated herein by this reference.

VII. ADOPTION OF MITIGATION MONITORING PROGRAM

A. Pursuant to Public Resources Code section 21081.6, the Board of Supervisors hereby adopts a monitoring and reporting program for the mitigation measures that were included to avoid significant effects on the environment. Generally speaking, the contents of this program are set forth in Exhibit D (Mitigation Monitoring Program for the Central Disposal Site Rock Extraction Project, dated July 1998), attached hereto and incorporated herein by this reference. This mitigation monitoring program is designed to ensure compliance with the mitigation measures adopted for the proposed project. It will be implemented in accordance with all applicable requirements of CEQA, the State CEQA Guidelines and the County's CEQA Ordinance.

VIII. STATEMENT OF OVERRIDING CONSIDERATIONS

A. As to the significant environmental effects identified in this Resolution which are not mitigated or substantially lessened, the Board finds that specific economic, social, or other considerations make infeasible full mitigation of those impacts and make project alternatives infeasible, or that changes are the responsibility of another agency and should be adopted by such agency and not the County of Sonoma. The Board has weighed the benefits of the project against its unavoidable adverse environmental effects identified in the Final EIR and hereby determines that these environmental impacts are "acceptable" and hereby finds that there

are overriding considerations which mitigate toward the Board's approval of the project which are identified in Exhibit E attached hereto and incorporated herein by this reference.

IX. PROJECT CONSISTENCY FINDINGS

A. The General Plan designates the proposed rock extraction site in a "Public Facilities" land use category which permits surface mining, and the General Plan designates the proposed processing site in a "Resources and Rural Development" land use category which permits quarry processing if conducted in compliance with the ARM Plan and the County's Surface Mining and Reclamation Ordinance (SMARA). Mining operations are required to have a permit (or vested right), reclamation plan and financial assurance approved prior to commencing mining operations. The conditions of approval require compliance with the ARM Plan and the operational and reclamation standards of SMARA. General Plan Policy RC-11b applies to mineral resources and states "Review projects for environmental impacts and land use conflicts and consider the following minimum factors when approving mining permits: topsoil salvage, vegetation, fisheries and wildlife impacts, noise, erosion control, roadway conditions and capacities, reclamation and bonding, air quality, energy consumption, engineering and geologic surveys, aggregate supply and replenishment, drainage and the need for economical aggregate materials." The potential for impacts within these areas was assessed through the initial study and the Final EIR. Appropriate mitigation measures have been identified and required to reduce all impacts to a level of insignificance, except for the items identified in Exhibit B for which statements of overriding consideration are hereby adopted in Exhibit E. Therefore, the Board of Supervisors finds the proposed project is consistent with the County General Plan.

B. The ColWMP/Program EIR was adopted by the Board of Supervisors on August 23, 1994, and served to revise and update the 1976 County Solid Waste Management Plan. The Program EIR has been used as a program EIR for the landfilling phase of this project and the project has been designed in conformity with the mitigation measures set out in the Program EIR.

C. The Aggregate Resources Management Plan/Program EIR was adopted by the Board of Supervisors on November 1, 1994 and served to revise and update the 1980 ARM Plan. The Program EIR has been used as a program EIR for this project and the Conditions of Approval contained in Exhibit F attached hereto and incorporated herein by this reference have been prepared in conformity with the mitigation measures set out in the Program EIR.

D. The Board finds that the project, if carried out in accordance with this Resolution and the conditions of approval in Exhibit F attached hereto and incorporated herein by this reference, is and will be consistent with the California Surface Mining and Reclamation Act and the local ordinance implementing it.

X. GENERAL WELFARE

A. The Board finds that the approval of a surface mining permit and reclamation plan and use permit to facilitate the rock extraction under the circumstances of this particular case and the conditions specified herein, will not be detrimental to the health, safety, peace, comfort and general welfare of persons residing or working in the neighborhood or to the general welfare of the area.

NOW, THEREFORE, based on the record of this proceeding and the foregoing findings and determinations, the Board of Supervisors does hereby take the following actions:

1. Certify the Final EIR for the Project. The Board certifies that the Final EIR, constituting the Draft EIR, comments and responses thereto, has been completed, reviewed, and considered in compliance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, and finds that the Final EIR reflects the independent judgement of the Board.

2. Approval of Surface Mining Permit and Reclamation Plan. The Board approves a surface mining permit and reclamation plan as proposed on APN 024-080-19 (Central Disposal Site) subject to the conditions of approval set forth in Exhibit F attached hereto and incorporated by reference herein.

3. Approval of Use Permit. The Board approves the use permit as requested for the existing Stony Point Quarry on APN's 025-050-005, 011 and 013 subject to the conditions of approval set forth in Exhibit F attached hereto and incorporated by reference herein.

4. Adoption of Mitigation Monitoring Program. The Board adopts the mitigation monitoring program set forth in Exhibit D and directs staff to follow up in accordance with such program to ensure that the required mitigation measures are carried out.

5. Statement of Overriding Considerations. The Board adopts the statement of overriding considerations set forth in Exhibit E, after finding that the project has certain environmental, economic, social and other benefits which make the unavoidable adverse environmental impacts associated with it acceptable, and that mitigation of certain cumulative environmental impacts is in the jurisdiction of other agencies.

6. Notice of Determination. The Board directs staff of the Permit and Resource Management Department to file a notice of determination and a Certificate of Fee Exemption from the environmental document filing fee required by the California Department of Fish and Game under Title 14, California Code of Regulations, section 753.5. with the County Clerk in accordance with the provisions of CEQA, the state CEQA Guidelines and the County's CEQA ordinance.

7. Custodian of Documents. The Board is the custodian of the documents or other material which constitute the record of proceedings upon which this Board's decision

herein is based. These documents may be found at 575 Administration Drive, Room 100A, Santa Rosa, California.

SUPERVISORS:

CALE Aye HARBERSON Aye SMITH Aye REILLY Aye KELLEY Aye

AYES 5 NOES 0 ABSTAIN 0 ABSENT 0

SO ORDERED.

Resolution Number 98-1524

County of Sonoma
Santa Rosa, California

December 8, 1998
PPR 97-5.1 Tim Mayer, Scott Briggs

RESOLUTION OF THE BOARD OF SUPERVISORS, COUNTY OF SONOMA, STATE OF CALIFORNIA, CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE CENTRAL DISPOSAL SITE IMPROVEMENT PROGRAM.

RESOLVED, by the Board of Supervisors ("Board") of the County of Sonoma that the Board hereby makes the following findings and determinations in connection with the Final Environmental Impact Report ("Final EIR") for the proposed Central Disposal Site Improvement Program

I. PROPOSED PROJECT

A. The Sonoma County Department of Transportation and Public Works, Integrated Waste Division has submitted to this Board a proposal to construct improvements to the Central Disposal Site, located at 500 Mecham Road, Petaluma (APN 024-080-019); Zoned PF (Public Facilities); Supervisorial District No. 2. The proposed improvements include: (1) expansion of the Central Landfill, which would allow the landfill to remain open approximately until the year 2014; (2) construction of a household hazardous waste collection facility; (3) construction of a landfill gas fuel facility; (4) construction of a contaminated soil bioremediation facility; and (5) operational improvements to the public tipping area and recycle/reuse area. The project includes acquisition of approximately 10 acres of land from an adjacent agricultural parcel located at 388 Mecham Road (APN 024-080-18), with an associated amendment to the Sonoma County General Plan and Petaluma Dairy Belt Area Plan changing the designation of the land to be acquired from Land Extensive Agriculture 160 acres/unit to Public/Quasi-Public, and a zone change on the same land from LEA B6 160 acres/unit to PF B7.

II. PROCEDURAL HISTORY

A. A Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) was circulated on July 6, 1995 to the State Clearinghouse and individual agencies. A scoping meeting was scheduled for July 19, 1995, and notice of the meeting was mailed to 17 federal, state, and local agencies. No agencies attended the meeting. A second scoping meeting was scheduled for August 23, 1995, and notices mailed to the same agencies. Two agencies attended that meeting. A meeting of the Sonoma County Environmental Review Committee was scheduled for July 18, 1995 to consider the scope of issues to be addressed in the Draft EIR. Notice of this meeting was mailed to over 200 interested parties.

B. A Draft Environmental Impact Report ("Draft EIR") dated October 1997 was prepared for the project following consultation with responsible and trustee agencies and interested persons. A notice of completion of the Draft EIR was filed with the Office of Planning and Research on or about October 3, 1997 bearing State Clearinghouse Number 95073068.

C. The Draft EIR was circulated for public review from October 6, 1997 to November 20, 1997. The state agency review period for written comments on the Draft EIR, as set by the State Clearinghouse, commenced on October 3, 1997 and ended on November 17, 1997. The County received written comments on the Draft EIR during the review period as more particularly set forth in the Response to Comments document.

D. On November 6, 1997 in accordance with the provisions of law, the Sonoma County Planning Commission held a public hearing on the Draft Environmental Impact Report (Draft EIR) for the project at which time all interested persons were given an opportunity to be heard.

E. A Revision to the Draft EIR dated July 1998 was prepared for the project to address impacts that would result from a proposal to excavate portions of the landfill expansion areas by blasting. A notice of completion of the revision was filed with the Office of Planning and Research on or about July 31, 1998 bearing State Clearinghouse Number 95073068.

F. The Revision to the Draft EIR was circulated for public review from July 31, 1998 to September 16, 1998. The state agency review period for written comments on the Draft EIR, as set by the State Clearinghouse, commenced on July 31, 1998 and ended on September 16, 1998. The County received written comments on the Draft EIR during the review period as more particularly set forth in the Response to Comments document.

G. On September 3, 1998 in accordance with the provisions of law, the Planning Commission held a public hearing on the Revision to the Draft at which time all interested persons were given an opportunity to be heard.

H. Following the end of the public review period, a Final EIR was prepared. Said Final EIR consists of the Draft EIR dated October 1997, the Revision to the Draft EIR dated July 1998, and the Response to Comments Document dated November 1998.

I. On November 5, 1998 the Planning Commission, in accordance with applicable law, conducted a duly noticed public hearing on the Final EIR and on the project, said hearing being continued to November 19, 1998 to allow additional public testimony.

J. On November 19, 1998 the Planning Commission took additional public testimony on the Final EIR and on the project, at which time all interested persons had an opportunity to be heard and were heard.

K. After the close of the public hearing the Planning Commission considered the Final EIR and the project and recommended that the Board of Supervisors:

1. Certify the Final EIR;

2. Amend the land use maps of the General Plan and Petaluma Dairy Belt Area Plan as proposed and make the proposed zone change;

3. Find the proposed project consistent with the General Plan and Petaluma Dairy Belt Area Plan, subject to the proposed changes to the land use maps;

4. Approve the proposed project, subject to inclusion of all the mitigation measures contained in the Final EIR; and

5. Consider certain additional recommendations, including: expanding the litter control efforts; offering water quality testing of private wells within one mile of the landfill; continuing the step-wise resolution of the existing groundwater contamination problem; adding third party monitoring of operational activities at the landfill that relate to public health and safety; additional off-site mitigation to further reduce economic impacts to the Camozzi dairy (APN 024-080-018); and expanding household hazardous waste services in the cities.

L. On or about November 12, 1998 notice was given of the Board meeting to consider certification of the Final EIR and approval of the project.

M. On December 1, 1998, the Board of Supervisors in public session discussed and considered the proposed Final EIR, concurred by straw vote that it had been prepared and completed in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, and directed staff to bring a resolution cerifying the Final EIR before the Board on December 8, 1998.

III. CERTIFICATION OF THE FINAL EIR

A. The Final EIR for the proposed Central Disposal Site Improvement Program consists of the Draft EIR dated October 1997, a Revision to the Draft EIR dated July 1998, and a Response to Comments document dated November 1998.

B. The Board hereby finds that:

1. The Final EIR has been completed in accordance with all applicable procedural and substantive requirements of CEQA, the State CEQA Guidelines and the County's CEQA Ordinance;

2. The preparation of the Final EIR represents a good faith effort to achieve completeness and full environmental disclosure;

3. The degree of specificity set forth in the Final EIR corresponds to the degree of specificity appropriate for the proposed Central Disposal Site Improvement Program;

4. The Final EIR was prepared, publicized, circulated and reviewed in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, and constitutes an adequate, accurate, objective and complete Final EIR in accordance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, for the purpose of approving the Central Disposal Site Improvement Program;

5. The Final EIR describes a reasonable range of alternatives; and

6. The Final EIR does not require recirculation, for the reasons set forth below.

C. The Board certifies that it has reviewed and considered the information in the Final EIR and finds that it represents the independent judgement of the County and is an adequate informational document, and that it has provided this Board and the public with full and fair disclosure of potential environmental impacts associated with the project. The Board has considered the Final EIR prior to making its final decision on the merits of the project.

IV. RECIRCULATION OF THE FINAL EIR

A. The Board finds that the revisions and modifications made to the Final EIR after the close of the public review and comment period but prior to certification of the Final EIR in response to comments received do not result in new or more severe adverse effects on the environment not previously disclosed in the Draft EIR or the Revision to the Draft EIR. These revisions and modifications to the Final EIR generally may be described as consisting of:

1. an expanded discussion of previously identified impacts;

2. an expanded listing of appropriate mitigation measures which generally are of the type previously identified in the Draft EIR circulated for public comment; and

3. changes to resolve ambiguities or inconsistencies in the Draft EIR.

B. None of the revisions constitutes "significant new information" within the meaning of CEQA inasmuch as none discloses:

1. a new substantial environmental impact resulting from the proposed project or from a new mitigation measures proposed to be implemented; and

2. a substantial increase in the severity of an environmental impact that will not be mitigated to a level of insignificance through adopted mitigation measures;

3. a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which is not required by the proposed project; or

4. that the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that the public comment on the draft was in effect meaningless.

C. For the reasons stated above, and those stated elsewhere in the record, the Board finds that the revisions to the Final EIR do not constitute "significant new information" within the meaning of CEQA so as to trigger recirculation of the Final EIR. More particularly, the Board finds:

1. The modifications to traffic impacts and mitigation measures identified in the Draft EIR do not change the types of impacts that would occur or the project's contribution to those impacts, nor do the modifications result in different types of mitigation measures than were identified in the Draft EIR;

2. The adoption by the U.S. EPA of a new air quality standard for very small particulate matter (called $PM_{2.5}$) does not constitute new information relevant to requiring new analysis of project impacts because at present there is no practical way to analyze such impacts. There is no accepted standard for estimating emissions or for modeling concentrations, no information on ambient background concentrations, and no thresholds of significance established by the Bay Area Air Quality Management District by which new emissions might be evaluated;

3. New evidence of groundwater contamination from seeps at the base of the landfill does not constitute significant new information requiring recirculation of the Final EIR because it is only another manifestation of a known inadequacy in the leachate collection and recovery system in the existing landfill, which had previously been indicated by contamination of monitoring well F-10 and discussed in the Draft EIR;

4. The recent detection of leaks in the leachate storage ponds does not constitute significant new information requiring recirculation of the Final EIR because the leaks have been or will be repaired, and will not affect the future use of the ponds. The pond leak detection system is designed to protect the environment, and has performed as intended. Leaks could occur again in the future, but the potential for such leaks would not be affected by the proposed project. If a leak were to occur in the future, it would be detected in the same manner as the present leaks, and repaired in the same way;

5. Other minor modifications to the text of the Draft EIR were made in response to comments on the Draft EIR for the purpose of clarification or of improving certain mitigation measures, but these modifications did not identify new significant impacts or mitigation measures that are substantially different from the Draft EIR;

6. All of the above-referenced modifications serve only to clarify or amplify statements contained in the DRAFT EIR or otherwise make insignificant changes; and

7. That none of the purposes of CEQA would be served by additional public comment on the Final EIR, but that only needless delay would result.

V. PROJECT SEGMENTATION

This Board approved the Central Disposal Site Rock Extraction project on August 18, 1998. This Board finds that the proposed Central Disposal Site Improvement Program is separate and independent from the Rock Extraction project. The Rock Extraction project is a project to be done in conjunction with the operation of the existing landfill which will add approximately 8 months capacity to the existing landfill. This extra capacity will be within the existing permitted footprint of the landfill. In contrast, the Central Disposal Site Improvement Program would include a major expansion of the landfill outside the existing permitted footprint and would add about 10 years of capacity. Neither project depends upon the approval or completion of the other, and each would proceed independently from the other. A separate EIR was prepared for the Rock Extraction project, however, that EIR considered the cumulative impacts that would occur if both projects were to be implemented. Similarly, the Final EIR for the proposed project considers the cumulative impacts of the proposed project and the Rock Extraction project. The Rock Extraction project is described in Section 6.1, and the cumulative impacts of both projects are described in Section 6.2 of the Final EIR. The Board finds that there was no improper segmentation of these projects because all cumulative impacts have been discussed and considered.

NOW, THEREFORE, based on the record of this proceeding and the foregoing findings and determinations, the Board of Supervisors does hereby take the following actions:

1. Certification of the Final EIR. The Board certifies that the Final EIR has been completed, reviewed, and considered in compliance with CEQA, the State CEQA Guidelines and the County's CEQA Ordinance, and finds that the Final EIR reflects the independent judgement of the Board.

2. Custodian of Documents. The Board is the custodian of the documents or other material which constitute the record of proceedings upon which this Board's decision herein is based. These documents may be found at 575 Administration Drive, Room 102A, Santa Rosa, California.

SUPERVISORS:

CALE HARBERSON SMITH REILLY KELLEY

AYES 5 NOES ABSTAIN ABSENT

SO ORDERED.

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403
Edward J. Walker, Director

AREA CODE (707)

ROADS	565-2231
TRANSIT	585-7516
REFUSE	565-2231
AIRPORT	524-7243
AIR POLLUTION	433-5911
FAX	565-2620

November 17, 1999

File: 50-01-17.6

Bob Swift
Sonoma County Health Services
Environmental Health Division
1030 Center Drive, Suite A
Santa Rosa, CA 95403

Re: **Transmittal of Mitigation Monitoring Programs for Central Disposal Site Improvement Program and Central Disposal Rock Extraction Program**

Dear Mr. Swift:

As requested in your letter of November 9, 1999, we are forwarding two copies each of the following:

1. Mitigation Monitoring Program - Central Disposal Site Improvement Program, Approved December 15, 1999

2. Mitigation Monitoring Program - Central Disposal Site Rock Extraction Project, Approved August 18, 1998

The submitted programs include descriptions and time of implementation of the mitigation measures for the various components of the projects.

The other items requested in your referenced letter, the Board of Supervisors Resolutions of Certification of the EIRs for these two programs, were transmitted to you on November 8, 1999.

If you have any questions, please contact me at (707) 792-4958.

Very truly yours,

EDWARD J. WALKER, DIRECTOR
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Don R. Poindexter, Sr. Civil Engineer

Enclosures: As listed above (two sets)

c: Ed Walker, Ken Wells, Susan Klassen
Terri Kinney, RWQCB, w/encl.

MITIGATION MONITORING PROGRAM

Sonoma County Permit and Resource Management Department
Environmental and Comprehensive Planning Division
2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 527-1900 Fax (707) 527-3767

Pursuant to Sections 21081.6 of the Public Resources Code, this form constitutes the **Mitigation Monitoring Program** as approved by the Board of Supervisors that is to be implemented as part of this project.

Project Title: Central Disposal Site Rock Extraction Project
Project Location/Address/APN: 500 Mecham Road, Petaluma, APN 024-080-019; and 7171 Stony Point Road, Petaluma, APNs 024-050-005, 011 and 014.
Lead Agency: Sonoma County
Decision Making Body: Board of Supervisors
Date of Approval: August 18, 1998
Project Applicant: Transportation and Public Works/Integrated Waste Division and Stony Point Quarry, Inc.
Department File #'s: SMP93-570 and UP94-681
State Clearinghouse Number: 97022022

The California Environmental Quality Act (CEQA), Section 21081.6, requires that a local agency adopt a mitigation monitoring or reporting program to ensure compliance with mitigation measures when a local agency approves a project for which an EIR or Mitigated Negative Declaration has been adopted, in order to mitigate or avoid significant effects on the environment.

Mitigations were included in the recommended Conditions of Approval. It is the responsibility of the Sonoma County Board of Supervisors as the hearing body to approve a monitoring program to ensure that all changes or conditions are complied with. The following mitigation measures are to be implemented as part of the project. This program identifies the time to implement each measure and the person responsible, and includes a record of compliance. Below is a description of the procedure to be followed for completing the Mitigation Monitoring Program.

The Integrated Waste Division Manager is responsible for mitigations in the project design and, where applicable, in the contract plans and specifications. The Integrated Waste Division Manager will sign and date below each mitigation measure when each has been completed. The Integrated Waste Division Manager will transmit the Mitigation Monitoring Program to the Construction Engineer, and will transmit a copy of the Mitigation Monitoring Program to the Environmental and Comprehensive Planning Division of the PRMD before project startup.

The Permit and Resource Management Department is responsible for monitoring the compliance of aggregate operations with all permits and ordinance requirements as part of the monitoring and inspection program established by the County's Aggregate Resource Management (ARM) Plan and the State Surface

Mining and Reclamation Act (SMARA). The ARM Plan requires quarry sites to be inspected a minimum of every 90 days during operations to ensure compliance with permit conditions and mitigations. In some cases a responsible agency acts as the lead agency responsible for monitoring compliance within a specific area. All complaints will be responded to within one week. Copies of the inspection reports shall be placed in the project file.

After all mitigations have been signed, the permanent record of this report will be kept in the project file in the Environmental and Comprehensive Planning Division of the Sonoma County Permit and Resource Management Department.

In order to provide for technically qualified and practical oversight of the blasting control measures included in this Mitigation Monitoring Plan in a manner that best protects the interests of Sonoma County, the following describes the specific personnel, personnel qualifications, and responsibilities of those who will monitor, and provide third-party overview, of all on-site monitoring efforts in this Plan that relate to blasting. As indicated in this Plan, the Integrated Waste Manager, and the Permit and Resource Management Department, will still maintain final sign-off responsibility for the implementation and recording of all proposed blasting mitigation.

- The **blasting engineer/contractor** will conduct the excavation blasting. This will be a blaster licensed in the State of California and provided by Stony Point Rock Quarry.

- The **blasting monitor (two trained IWD staff; a primary and an alternate)** will monitor all blasting operations to be sure that they are conducted in strict accordance with the blasting control measures identified in the FEIR and made Conditions of Approval for the proposed project. On-site training of these monitors will be provided by the **blasting consultant/auditor**. The Sonoma County LEA (Bob Swift or a designated alternate) will also receive this on-site training, and will monitor blasting activity at the excavation site periodically, at LEA discretion.

- The third party **blasting consultant/auditor** will be responsible for training the blasting monitors, will perform periodic on-site compliance audits of the blasting operations to ensure that blasting is being conducted in strict accordance with blasting control specifications, and will prepare annual reports summarizing the blasting compliance efforts. It is proposed that Gordon Revey, Principal Consultant at GEOTEK, or a similarly-qualified blasting expert fulfill this role.

The staff described above are pertinent to monitoring efforts associated with the following mitigation measures included in this plan:

- Water Resources Mitigation Measure No. 2 (spillage of explosives, page D-5).

- Water Resources Mitigation Measure 5a-5d (blasting design controls, ground motion monitoring, pages D-6 through D-8).

- Noise Mitigation Measure No. 1 (overpressure monitoring, stemming, pages D-15 through D-17).

- Air Quality Mitigation Measure No. 1 (dust control, pages D-17 through D-18).
- Air Quality Mitigation Measure No. 2c (chemistry of explosives mix, pages D-18 through D-19).
- Public Health and Safety Mitigation Measure No. 3a-3d (methane monitoring, time of day, clear zone, pages D-20 through D-22).

The following mitigations are arranged in the same order as the conditions of approval in Exhibit F of Board of Supervisors' resolution 98-1103, beginning with the mitigations of the surface mining permit and reclamation plan, followed by the mitigations of the landfilling phase of the project, and finally the mitigations of the use permit for processing at Stony Point Quarry. Some of the mitigations apply to more than one phase of the project and are repeated accordingly.

SURFACE MINING PERMIT AND RECLAMATION PLAN

Geology Mitigation Measure No. 2: Rock shall be excavated, and processed rock shall be stockpiled, in such a manner that the slope or height of the active working face does not exceed the safety standards established by CalOSHA and MSHA. Final reclamation slopes shall not exceed a steepness of 3:1. Both CalOSHA and MSHA will inspect the quarry and excavation site at least once a year to verify compliance.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during the life of the project.

Monitoring: Monitoring will be ongoing during the life of the project by the Permit & Resource Management Department.

Record: Mitigation has been incorporated into project and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager)_____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.) _____ Date

Geology Mitigation Measure No. 4: The Storm Water Pollution Prevention Plan for the landfill will be revised to address all phases of the rock extraction project. The plan will be submitted to the Regional Water Quality Control Board, and at a minimum will include:

A) A description of the critical features of the erosion control system, including the sediment ponds and drainage ways, along with a description and schedule for routine maintenance of these features. During the excavation phase of the project, at a minimum the following three measures shall be required:

1) A storm water diversion ditch shall be constructed above the excavation to prevent stormwater runoff from transporting sediment into the mining area.

2) The floor of the excavation area shall be graded at a 3% slope to the southeast so that the post-mining overland drainage will follow the same course as existing drainage, and

3) A sediment trap shall be constructed below the excavation area by October first of each year to remove eroded soil from storm runoff during the wet weather season. The sediment trap may be a pond or a system of straw bales or sediment fence or any other system that will prevent sediment from leaving the site, and will be located to intercept runoff from the site before it enters the landfill drainage system and the existing sediment pond.

B) A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to initiation of the excavation and construction of the excavation-site landfill, as appropriate.

C) Specifications for revegetating disturbed areas, including the areas to be revegetated, the procedures to used, and the time of year seeding is to be done.

D) Specifications for placing mulch or temporary covers where erosion potential exists.

E) Best Management Practices for excavation and construction and operation of the excavation -site landfill area. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property related to the rock extraction project.

F) Specifications for watering roads and construction areas to control wind erosion.

G) An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.

H) A schedule for winterizing the site that will ensure that critical work is done prior to October 15 of each year.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup by the Permit & Resource Management Department.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project operation.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 2: Prior to rock excavation and construction of the landfill liner and leachate collection and removal system (LCRS), a Spill Prevention Plan will be prepared. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. The plan will require that any explosives spilled during the loading of the blasting holes be cleaned up prior to detonating the explosives. Equipment refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. The Sonoma County Public Health Department is responsible for the review and approval of this updated plan.

Implementation: The Integrated Waste Division Manager will implement this mitigation prior to project implementation.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 3: Subsurface testing shall be performed prior to the actual commencement of excavation operations to confirm the exact limits of refuse known to lie adjacent to the southern and eastern boundaries of the proposed excavation area. These boundaries will be carefully marked, and mining will be prohibited within 25 feet

of the boundary of any adjacent refuse areas to prevent the inadvertent disturbance of this refuse and all surrounding structures related to the landfill (for example, the gas line known to lie southeast of the excavation area).

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to commencement of excavation operations.

Monitoring: Monitoring will be completed prior to the actual commencement of excavation operations.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to commencement of excavation operations.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 5a: Blasting shall only be employed where ripping operations with a D8 bulldozer or larger cannot adequately loosen the rock to be removed. Blasting shall only be conducted by licensed, certified personnel consistent with Federal, State and Local regulations. Actual blasting shall be limited to the hours of 4:30 PM to 5:30 PM, when the public is not present. A safety setback perimeter, consistent with OSHA and MSHA requirements, shall be established around the blast site with cones. Prior to a blast, all access points to the blasting area shall be blocked by signage and/or sentries to assure a safe clear zone around the blast. Detonations shall not be initiated until the landfill manager indicates that all affected personnel have been notified.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during operation by the Permit & Resource Management Dept.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resource Mitigation Measure No. 5b: All explosive delays shall be detonated sequentially so that there is at least 0.008 seconds between each detonation.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during operation by the Permit & Resource Management Dept.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 5c: The bore holes for blasting shall be limited to a maximum of 110 and should initially be drilled on a 10' by 10' grid. Bore holes shall be limited to a maximum diameter of 4 inches and a depth which assures that a maximum bench height of 30 feet is not exceeded. Bore holes shall be drilled in a manner to maintain a 3% slope to the southeast.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during operation by the Permit & Resource Management Dept.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 5d: The amount of explosives per hole shall be limited to a maximum of 9.75 lbs. per delay within 25 feet of the gas pipeline, but the amount of explosives may be increased as distance from the pipeline increases provided that 1) all blasts are seismically monitored, and 2) the following two formulas are used to calculate the maximum amount of explosives that shall not be exceeded per each delay, to a maximum of 200 pounds, in order to assure no adverse vibration impacts result from the blasting activities:

- maximum allowable weight (lbs) of explosives per delay = (Distance (ft) between blast and house /60)^2

- maximum allowable weight (lbs) of explosives per delay = (Distance (ft) between blast and gas pipe/10)^2

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during operation by the Permit & Resource Management Dept.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 1a: The Integrated Waste Division will restrict truck traffic that is subject to County control, including all rock-haul traffic, so that trucks do not travel through the Stony Point/Mecham intersection between 7:00AM and 8:30 AM, Monday through Friday. This will apply to new truck trips associated with the project, and not to existing traffic using the Central Disposal Site. The restriction will apply to trucks hauling rock from the landfill and project trucks returning to the landfill from Stony Point Quarry empty or with back-hauled cover material. This measure will remain in effect until a traffic signal has been installed at this intersection.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during operation by the Permit & Resource Management Dept.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 1b: Prior to commencement of hauling, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Mecham intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants.

To ensure that the funds are available to install the signal when it is needed, the Integrated Waste Division will provide up to 100 % of the cost of design and construction of the signal when the signal is warranted. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the fair share costs as the funds become available.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications.

Monitoring: Monitoring by the Permit & Resource Management Dept. will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No.2a: The Integrated Waste Division will restrict truck traffic that is subject to County control, including all rock-haul traffic, so that trucks do not travel through the Stony Point Road/Roblar Road intersection between 7:00 and 8:30 AM, Monday through Friday. This will apply to new truck trips associated with the project, and not t existing traffic using the Central Disposal Site. The restriction will apply to trucks hauling rock from the landfill and project trucks returning to the landfill from Stony Point Quarry empty or with back-hauled cover material. This measure will remain in effect until a traffic signal has been installed at this intersection.

Implementation: The Integrated Waste Division Manager will ensure the traffic mitigation fee is paid.

Monitoring: Monitoring by the Permit & Resource Management Dept. will be completed prior to the commencement of hauling.

Record: Mitigation has been completed.

_____ (Integrated Waste Manager) _____ Date

Mitigation has been completed.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 2b: Prior to commencement of hauling, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Roblar intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants.

To ensure that the funds are available to install the signal when it is needed, the Integrated Waste Division will provide up to 100 % of the cost of design and construction of the signal when the signal is warranted. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the fair share costs as the funds become available.

Implementation: The Integrated Waste Division Manager will ensure the traffic mitigation fee is paid.

Monitoring: Monitoring by the Permit & Resource Management Dept. will be completed prior to the commencement of hauling.

Record: Mitigation has been completed.

_____ (Permit & Resource Management Dept.) _____ Date

Long term monitoring has been implemented.

_____ (Integrated Waste Manager) _____ Date

Traffic Mitigation Measure No. 4a: The Department of Transportation and Public Works will compensate for the limited sight distance at the Mecham Road/Wambold Lane intersection by installing a 35 mph speed-advisory sign for northbound Mecham Road between the landfill access road and Wambold Lane. This measure shall be implemented prior to commencement of rock hauling. The Integrated Waste Division will pay the cost of this installation.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to commencement of rock hauling.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 4b: Prior to the commencement of hauling, the quarry operator and the Integrated Waste Division shall implement a truck driver education program which familiarizes rock and commercial refuse haulers, and any other commercial haulers who regularly pick up or deliver materials to the Central Disposal Site and are subject to control by the County, with speed limit zones, school bus stops, areas of low sight distance on the haul route, permit limits on trucking, weight and load height limits, circulation routes through the landfill to minimize interference, and other measures which will reduce public conflicts. The Integrated Waste Division shall submit a verification list of the drivers receiving the orientation to the Permit and Resource Management Department.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to commencement of rock hauling.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 6: Prior to commencement of the hauling phase of this project, the shoulders on Hammel Road will be widened, a double yellow centerline will be painted on the hill, and improvement of the turning radius at the Mecham Road intersection will be made. The repairs will be made by the Road Division of the Department of Transportation and Public Works or by the Integrated Waste Division. If repairs are made by the Road Division, the Integrated Waste Division and Stony Point Quarry will compensate the Road Division for the cost of these improvements.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 8: Damage to Hammel Road caused by haul trucks returning to the landfill from Stony Point Quarry, or by trucks hauling leachate, will be repaired as necessary to keep the road in a safe and passable condition. The repairs will be made by the Road Division of the Department of Transportation and Public Works or by the Integrated Waste Division. If repairs are made by the Road Division, compensation will be made to the Road Division by the Integrated Waste Division and Stony Point Quarry for the portion of the repairs that are related to damage caused by this project.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during the life of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 9: The Department of Transportation and Public Works will either: (1) provide all-weather material for the construction of vehicle turn-around areas at the driveways to 301, 303, 305, and 319 Mecham Road; or (2) widen the shoulder of Mecham Road near these driveways to provide more room for residents to turn their cars around before entering the traffic lane. The Integrated Waste Division will pay the cost of these improvements. This measure will be implemented prior to commencement of the rock-hauling phase of the project.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project implementation

Monitoring: Monitoring will be completed prior to project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No.11: Prior to commencement of hauling, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/West Railroad intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site impacts.

The Road Division of the Department of Transportation and Public Works will also monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project implementation

Monitoring: Monitoring will be completed prior to project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No.12: Prior to commencement of hauling, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Pepper Road intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site impacts.

The Road Division of the Department of Transportation and Public Works will also monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project implementation

Monitoring: Monitoring will be completed prior to project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Permit & Resource Management Dept.) _____ Dat

Noise Mitigation Measure No. 1: Refer to Water Resources Mitigation Measure No. 5a which limits blasting to situations where a D8 bulldozer cannot loosen the rock to be removed. It also requires that blasting only be conducted by licensed certified personnel, and that it be limited to between 4:30 and 5:30 PM. It also requires a safety zone and authorization of the Central Disposal Site Manager before detonations are initiated.

In the event that blasting noise generates complaints, the blasting design for future blasts shall be modified in one or more of the following ways to achieve a reduction in offsite noise impacts:

a) avoid blasting during weather conditions such as inversions or when wind conditions are unfavorable,

b) use a quiet initiation system or bottom hole initiation,

c) avoid short delay periods,

d) provide adequate burden and stemming. Specifically, the contractor shall use only ⅜ to ½ inch clean crushed stone for stemming all explosive charges. The minimum stemming height will exceed eight feet and stemming will be lightly tamped with a loading pole while it is poured in holes to ensure that no air gaps occur in the stemming column.

The contractor shall examine all exposed rock surfaces to ensure that the minimum burden distance exists between the bore hole and the rock face.

The drill operator shall keep a drilling log that details any weak or unusual ground conditions encountered while drilling blast holes. Drill logs will identify blast holes by number on a diagram. The logs shall indicate hole depth, the presence and depth of water, and describe the location of any weak zones or voids intercepted by the blast holes. A copy of the log shall be submitted to the blasting contractor at least one hour before any blast holes are loaded with explosive.

If open cracks or weak seams are found during drilling, the blasting contractor shall make necessary blast design adjustments to isolate the explosive charges from the weak areas.

e) minimize the face height, and/or use nonexplosive decks.

f) Overpressure shall be monitored at the nearest residence (or at the site property boundary nearest the blast area if the adjacent property owner will not permit

monitoring). If the overpressure is greater than 133 dB-L, the blasting contractor shall make adjustments to the next blast to ensure that overpressure at the nearest residence does not exceed 133 dB-L. Such adjustments may include additional measures to increase confinement, or reducing the weight of explosive per blast hole.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.)_____ Date

Air Quality Mitigation Measure No. 1: The Integrated Waste Division will revise its present dust control plan to reduce dust emissions from construction and operation of the proposed excavation project. The plan will be in place prior to commencement of excavation activities. In addition, Stony Point Quarry will update its dust control plan at the quarry to ensure dust suppression during processing, storage, and sale of the imported Central Disposal Site rock. At a minimum the plans will contain the following features:

1. Construction areas will be watered as needed to control dust.

2. Water or other dust suppressants will be used on unpaved haul roads.

3. Watering will be done more frequently when wind speeds exceed 15 mph.

4. Dirt and rock stockpiles will be watered or otherwise protected with a dust suppressant.

5. Vehicle speeds will be limited to 15 mph on unpaved haul roads.

6. Integrated Waste staff will monitor the condition of the main access road and Hammel Road, including their intersections with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.

7. Stony Point Quarry staff will monitor the condition of the quarry entrance and exit, including their intersections with Stony Point Road. The pavement

will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.

8. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.

9. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.

10. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the Blasting Engineer will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.)_____ Date

Air Quality Mitigation Measure No. 2a: Contracts for excavation/rock hauling and operation of the landfill facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.)_____ Date

Air Quality Mitigation Measure No. 2c: To prevent formation of significant amount of NO_X, all blasting in theEast or West Canyon landfill expansions will incorporate the following measures:

(1) The blasting contractor shall use water resistant explosives in any bore hole that contains water. Non-water resistant explosives may be used above the wet areas of bore holes, provided that water resistant explosives are used in the wet areas and the bore hole is sealed above the wet area so that the non-water resistant explosive remains above the wet area.

(2) Blended ammonium nitrate/fuel oil blasting agents shall contain at least 5.7% fuel oil by weight.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.)_____ Date

Cultural Resources Mitigation No. 1: In the event that paleontologic resources are uncovered by excavation activities, excavation in the vicinity shall be halted, the Permit and Resource Management Department shall be contacted, and the notification, handling, and other procedures specified in the "Cultural Resources" discussion in section 15 of Chapter 8 of the ARM Plan shall be implemented as applicable.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored during operation.

_____ (Permit & Resource Management Dept.) _____ Date

Public Health and Safety Mitigation Measure No. 1: The Sonoma County Integrated Waste Division shall expand the Central Disposal Site emergency notification list to include the Stony Point Quarry for the duration of the rock extraction activities at the landfill site. In the event of an emergency, project truck traffic to and from the landfill may be halted by direction of the Central Disposal Site Manager.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Public Health and Safety Mitigation Measure No. 3a: Blasting shall be conducted in accordance with the scaled distance and charge limitation guidelines included in Water Resources Mitigation Measure No. 5.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Public Health and Safety Mitigation Measure No. 3b: Prior to placing explosives in the blast holes,methane detecting equipment will be used to determine whether methane gas is present at the collars of at least 15 blast holes that are nearest the areas of the landfill that contain buried refuse. The methane detecting equipment shall meet the standards set by the Mine Safety and Health Administration in CFR 30, Part 22 - Portable Methane Detectors, Section 22.6. If the monitors detect methane in concentrations exceeding 0.5%, the blasting contractor shall use only explosives especially formulated for safe use in gassy environments.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Public Health and Safety Mitigation Measure No. 3c: As required in Water Resources Mitigation Measure No. 5a, blasting shall be limited to the hours of 4:30 PM to 5:30 PM when the public is not present. A safety setback perimeter, consistent with OSHA and MSHA requirements, shall be established around the blast site with cones. Prior to a blast, all access points to the blasting area shall be blocked by signs and/or sentries to assure a safe clear zone around the blast. Detonations shall not be initiated until the landfill manager indicates that all affected personnel have been notified.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during project operation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

LANDFILLING PHASE

Geology Mitigation Measure No. 1: The design for landfill in the excavation area will be prepared by a qualified engineering firm. The design will incorporate features similar to those proposed for the East Canyon expansion, or other features deemed to be adequate by the consulting engineer and the Regional Water Quality Control Board, to prevent significant damage to the landfill from earthquake-induced ground shaking of 0.32 g and from slope failures induced by earthquakes or other causes.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation.

Monitoring: Monitoring will be completed prior to project construction.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Geology Mitigation Measure No. 3: The grading plan for the excavation-site landfill area will incorporate grading procedures, as necessary to prevent slope failures. The embankments for sedimentation basins in use during the landfilling phase of this project will also be constructed so that the factor of safety is greater than 1.5.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and the quarry operator will implement this mitigation during the life of the project.

Monitoring: Monitoring will be ongoing during the life of the project by the Integrated Waste Division.

Record: Mitigation has been incorporated into project and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Da

Mitigation has been implemented and monitored during construction.

_____ (Construction Engineer) _____ Date

Water Resources Mitigation Measure No. 1a: The Integrated Waste Division will empty both leachate ponds before October 1 each year. The completion of this action will be reported to the RWQCB before October 15 each year.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation over the life of the project.

Monitoring: Monitoring will be ongoing during the life of the project by the Integrated Waste Division Manager.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Da

Mitigation has been implemented and monitored over the life of the project.

_____ (Integrated Waste Division Manager) _____ Date

Water Resources Mitigation Measure No. 1b: The Integrated Waste Division will monitor the leachate levels in both ponds at least once each day between October 1 and May 1. Leachate will be removed from the pond as needed to ensure that the 2-foot freeboard will be maintained at all times.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation over the life of the project.

Monitoring: Monitoring will be ongoing during the life of the project by the Integrated Waste Division Manager.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored over the life of the project.

_____ (Integrated Waste Division Manager) _____ Date

Water Resources Mitigation Measure No. 1c: The Integrated Waste Division will identify specific water treatment equipment that will reduce concentrations of heavy metals to levels acceptable by the public wastewater treatment plant to accept the leachate for disposal during the landfilling phase of this project. The Integrated Waste Division will install whatever fittings are needed to allow rapid installation of the water treatment equipment at the leachate ponds, and will keep on site all pipes, hoses, pumps, or other equipment that is needed to install the water treatment equipment. Each year the Integrated Waste Division will have the necessary water treatment equipment on site by December 1, and will keep the equipment on site and ready to use at least until May 1 the following year. The Integrated Waste Division will test the leachate and treat it as needed to meet the requirements for disposal.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to the landfilling phase of the project.

Monitoring: Monitoring will be completed prior to the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Traffic Mitigation Measure No. 3: The Department of Transportation and Public Works will compensate for the limited sight distance at the Highway 101 offramp/West Railroad Avenue intersection by installing an all-way stop at the intersection or posting advisory speed signs or other warning signs on the West Railroad Avenue intersection approaches. This measure shall be implemented prior to commencement of the landfilling phase of the project. The Integrated Waste Division will pay the cost of these improvements.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project construction.

Monitoring: Monitoring will be completed prior to the commencement of the landfilling phase of the project.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Noise Mitigation Measure No. 2a: The Integrated Waste Division will ensure that the residences fronting Mecham Road which could be significantly impacted by traffic noise caused by the project can meet the interior noise standard (45 dB L_{dn}). This measure applies to the residences identified in Noise Impact 2a.

Provided the owners agree, the Integrated Waste Division will determine by measurement or calculations which of the residences do not provide the necessary noise attenuation to meet the 45 dB L_{dn} standard with the windows closed.

For those residences which do not provide the necessary attenuation, the Integrated Waste Division will pay the cost and arrange for the installation of improvements to achieve the necessary sound attenuation. If an owner prefers to install the improvements or select other parties to install the improvements, the Integrated Waste Division will pay to the owner the estimated cost of the improvements. Improvement may include replacing existing windows that face Mecham Road with laminated glass or other acoustically rated window systems and weatherstripping doors that face Mecham Road to eliminate acoustical leaks. If necessary to provide fresh air and cooling to maintain a habitable environment in rooms that require closed windows, a mechanical ventilation/cooling system conforming to the requirements of the Uniform Building and Mechanical Codes may be installed.

In addition, in order to reduce unnecessary noise at the entrance of the landfill caused by landfill employees and drivers insensitive to impacts upon area residents, the landfill employee training program will be modified to make all employees aware of early morning and late afternoon noise issues at the landfill entrance. This noise sensitivity training will occur prior to initiation of the project.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project construction.

Monitoring: Monitoring will be implemented prior to project implementation.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored prior to project implementation.

_____ (Integrated Waste Division Manager) _____ Date

Noise Mitigation Measure No. 2b: The Integrated Waste Division will offer to construct a six-foot high solid wood fence along the front property lines of the properties identified above under Noise Impact No. 2b. If accepted by the property owners, the Integrated Waste Division will construct the fence, or pay the cost of construction by others.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project construction.

Monitoring: Monitoring will be completed prior to the commencement of the landfilling phase of the project.

Record: Mitigation has been implemented.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Air Quality Mitigation Measure No. 2b: Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Air Quality Mitigation Measure No. 3a: The Integrated Waste Division will maintain stockpiles of cover soil and other cover materials to ensure that there will be an adequate supply of materials to cover refuse every day, even during extended periods of rain.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Air Quality Mitigation Measure No. 3b: The Integrated Waste Division will conduct monthly inspections of the landfill cover to detect surface cracks. Should cracks (potential odor sources) be detected, they will be repaired immediately.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Air Quality Mitigation Measure No. 4: The Integrated Waste Division will acquire and maintain on-site equipment and materials that will allow the adjustment of the pH in the leachate ponds. The ponds will be monitored by the Integrated Waste Division staff, and the pH will be adjusted when staff detects an odor problem or when the cause of any odor complaint appears to be the leachate ponds.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and prior to the landfilling phase of the project.

Monitoring: Monitoring will be ongoing.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____(Integrated Waste Division Manager) _____ Date

Visual Resources Mitigation Measure No. 1: The Integrated Waste Division will increase the frequency of litter pick up along Mecham Road and Stony Point Road from West Railroad Avenue to Hwy 116 so that these roadsides will be cleaned each day that the landfill is open. The Division will also post signs on Mecham Road that will give a phone number that people may call to report vehicles that are seen littering on the way to or from the Central Disposal Site. At least one sign for the northbound direction near Pepper Road and one for the southbound direction near Stony Point Road will be posted.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project construction.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Public Health and Safety Mitigation Measure No. 4: To increase public safety and for ease of refuse collection, a public tipping area is proposed adjacent to the landfill as part of the Central Disposal Site Improvement Program. If this part of the program is built, people will unload their refuse on a level paved floor. Refuse will be compacted, loaded into transfer trailers and hauled to the disposal area by landfill workers. After the tipping area is operational, the public will no longer be permitted to unload refuse at the landfill edge. Implementation of this proposed component of the Central Disposal Site Improvement Program would reduce this safety impact to a less than significant level.

If the public tipping area is not constructed as planned, temporary safety barriers should be placed along the operational edge of the landfill, where people unload, and warning signs should be displayed advising people that there is a steep drop off. Implementation of these measures will reduce this safety impacts to a less than significant level in the event that the tipping area is not constructed.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to the landfilling phase of the project.

Monitoring: Monitoring will be completed prior to the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Public Health and Safety Mitigation Measure No. 5: The Integrated Waste Division shall extend the program of measures to control scavenging birds to the extended life of the landfill resulting from the rock extraction project. Measures shall include using wires or exclusion structures over leachate ponds, using chemical repellents around areas of standing water, using noisemakers or other devices to frighten birds from the landfill, or other measures recommended by the Local Enforcement Agency.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during the landfilling phase of the project.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

Public Health and Safety Mitigation Measure No. 4: To increase public safety and for ease of refuse collection, a public tipping area is proposed adjacent to the landfill as part of the Central Disposal Site Improvement Program. If this part of the program is built, people will unload their refuse on a level paved floor. Refuse will be compacted, loaded into transfer trailers and hauled to the disposal area by landfill workers. After the tipping area is operational, the public will no longer be permitted to unload refuse at the landfill edge. Implementation of this proposed component of the Central Disposal Site Improvement Program would reduce this safety impact to a less than significant level.

If the public tipping area is not constructed as planned, temporary safety barriers should be placed along the operational edge of the landfill, where people unload, and warning signs should be displayed advising people that there is a steep drop off. Implementation of these measures will reduce this safety impacts to a less than significant level in the event that the tipping area is not constructed.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation prior to the landfilling phase of the project.

Monitoring: Monitoring will be completed prior to the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Public Health and Safety Mitigation Measure No. 5: The Integrated Waste Division shall extend the program of measures to control scavenging birds to the extended life of the landfill resulting from the rock extraction project. Measures shall include using wires or exclusion structures over leachate ponds, using chemical repellents around areas of standing water, using noisemakers or other devices to frighten birds from the landfill, or other measures recommended by the Local Enforcement Agency.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during the landfilling phase of the project.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

Public Health and Safety Mitigation Measure No. 6: The Central Disposal Site Operations Manager will monitor areas containing landscaping or standing water and take such actions as necessary to ensure that they do not become a breeding area for rodents or mosquitoes. Such actions may include grading areas to drain, using biological controls, or applying insecticides and rodent traps in accordance with applicable regulations.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during the landfilling phase of the project.

Monitoring: Monitoring will be ongoing during the landfilling phase of the project.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager) _____ Date

Mitigation has been implemented and monitored.

_____ (Integrated Waste Division Manager) _____ Date

STONY POINT QUARRY USE PERMIT

Geology Mitigation Measure No. 2: Rock shall be excavated, and processed rock shall be stockpiled, in such a manner that the slope or height of the active working face does not exceed the safety standards established by CalOSHA and MSHA. Final reclamation slopes shall not exceed a steepness of 3:1. Both CalOSHA and MSHA will inspect the quarry and excavation site at least once a year to verify compliance.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during the life of the project.

Monitoring: Monitoring will be ongoing during the life of the project by the Permit & Resource Management Department.

Record: Mitigation has been incorporated into project and/or the contract plans and specifications.

_____ (Integrated Waste Division Manager)_____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.) _____ Date

Geology Mitigation Measure No. 5: The RWQCB "Best Management Practices" are to be used at Stony Point Quarry to prevent erosion and siltation problems. To comply with storm water regulations, the quarry operator shall file a "Notice of Intent" form and apply for an Industrial Activity Storm Water Permit with the State Water Resources Control Board or such application shall be deemed unnecessary by the Control Board. In addition, a Storm Water Pollution Prevention Plan shall be filed for all sites requiring a National Pollutant Discharge Elimination System Permit.

Implementation: The quarry operator will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been completed prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.) _____ Date

Water Resources Mitigation Measure No. 4: Prior to approval of the quarry use permit for this project, the existing quarry Spill Prevention Plan will be updated, as necessary, to address the potential for increased production activity at the quarry. The plan will identify procedures for refueling equipment, and performing equipment maintenance and repair that will minimize the potential for spills. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will contain contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. The Sonoma County Public Health Department is responsible for the review and approval of this updated plan.

Implementation: Stony Point Quarry will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Permit & Resource Management Dept.) _____ Dat

Mitigation has been implemented and monitored during project operation.

_____ (Permit & Resource Management Dept.) _____ Dat

Traffic Mitigation Measure No. 4b: Prior to the commencement of hauling, the quarry operator and the Integrated Waste Division shall implement a truck driver education program which familiarizes rock and commercial refuse haulers with speed limit zones, school bus stops, areas of low sight distance on the haul route, permit limits on trucking, weight and load height limits, circulation routes through the landfill to minimize interference, and other measures which will reduce public conflicts. The Integrated Waste Division shall submit a verification list of the drivers receiving the orientation to the Permit and Resource Management Department.

Implementation: The applicant and will implement this mitigation prior to commencement of rock hauling.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 5: A left-turn deceleration lane shall be constructed on the northbound Stony Point Road approach to the Stony Point Quarry entrance. This improvement, to be paid for by Stony Point Quarry, shall be completed prior to commencement of the rock hauling phase of the project.

Implementation: The applicant will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been incorporated into project design and/or the contract plans and specifications.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 6: Prior to commencement of the hauling phase of this project, the shoulders on Hammel Road will be widened, a double yellow centerline will be painted on the hill, and improvement of the turning radius at the Mecham Road intersection will be made. The repairs will be made by the Road Division of the Department of Transportation and Public Works or by the Integrated Waste Division. If repairs are made by the Road Division, the Integrated Waste Division and Stony Point Quarry will compensate the Road Division for the cost of these improvements.

Implementation: The applicant will implement this mitigation prior to project startup.

Monitoring: Monitoring will be completed prior to project startup.

Record: Mitigation has been implemented.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored prior to project startup.

_____ (Permit & Resource Management Dept.) _____ Date

Traffic Mitigation Measure No. 8: Damage to Hammel Road caused by haul trucks returning to the landfill from Stony Point Quarry, or by trucks hauling leachate, will be repaired as necessary to keep the road in a safe and passable condition. The repairs will be made by the Road Division of the Department of Transportation and Public Works or by the Integrated Waste Division. If repairs are made by the Road Division, compensation will be made to the Road Division by the Integrated Waste Division and Stony Point Quarry for the portion of the repairs that are related to damage caused by this project.

Implementation: The Integrated Waste Division Manager will include this mitigation in the project design and/or the contract plans and specifications, and will implement this mitigation during project operation.

Monitoring: Monitoring will be ongoing during the life of the project.

Record: Mitigation has been implemented.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored during operation..

_____ (Permit & Resource Management Dept.) _____ Date

Air Quality Mitigation Measure No. 1: The Integrated Waste Division will revise its present dust control plan to reduce dust emissions from construction and operation of the proposed excavation project. The plan will be in place prior to commencement of excavation activities. In addition, Stony Point Quarry will update its dust control plan at the quarry to ensure dust suppression during processing, storage, and sale of the imported Central Disposal Site rock. At a minimum the plans will contain the following features:

1. Construction areas will be watered as needed to control dust.

2. Water or other dust suppressants will be used on unpaved haul roads.

3. Watering will be done more frequently when wind speeds exceed 15 mph.

4. Dirt and rock stockpiles will be watered or otherwise protected with a dust suppressant.

5. Vehicle speeds will be limited to 15 mph on unpaved haul roads.

6. Integrated Waste staff will monitor the condition of the main access road and Hammel Road, including their intersections with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.

7. Stony Point Quarry staff will monitor the condition of the quarry entrance and exit, including their intersections with Stony Point Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.

8. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.

9. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.

10. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.

Implementation: The applicant will implement this mitigation prior to project operation.

Monitoring: Monitoring will be completed prior to project operation.

Record: Mitigation has been implemented.

_____ (Permit & Resource Management Dept.) _____ Date

Mitigation has been implemented and monitored prior to project operation.

_____ (Permit & Resource Management Dept.)_____ Date

EXHIBIT D

MITIGATION MONITORING PROGRAM

Sonoma County Permit and Resource Management Department
Environmental and Comprehensive Planning Division
2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 527-1900 Fax (707) 527-3767

Pursuant to Section 21081.6 of the Public Resources Code, the Sonoma County Board of Supervisors has adopted this Mitigation Monitoring Program for the mitigation measures that are to be included in this project.

Project: Central Disposal Site Improvement Program
Location: 500 Mecham Road
Lead Agency: Sonoma County
P.P.R.# 97-5.1
State Clearinghouse # 95073068

Project Applicant: Transportation & Public Works

Decision Making Body: Board of Supervisors
Date Approved: Dec 15, 1998
Contact Person: Tim Mayer (707) 527-3612

This Mitigation Monitoring Program has five parts - one for each component of the project. Each part contains all the mitigation measures for that particular component.

Part 1 - Expansion of the landfill into the East and West Canyons
Part 2 - Household Hazardous Waste Facility
Part 3 - Gas fuel facility
Part 4 - Soil bioremediation facility
Part 5 - Operational improvements (public tipping facility and recycle/reuse facility)

The mitigation measures in this plan are taken from the Final Environmental Impact Report for the Central Disposal Site Improvement Program. The table on the following pages lists all the mitigation measures that were approved as part of the project and indicates which project components must incorporate each measure.

All measures are to be implemented by the Integrated Waste Division of the Sonoma County Department of Transportation and Public Works. For each mitigation measure, this plan identifies the time at which the measure will be implemented and the title of the person or persons responsible for implementing and monitoring the mitigation. Each measure includes a record of compliance and a signature block for each responsible person.

Time of Implementation: This plan specifies a project stage during which the measures will be implemented. The following stages are used for all components of the project:

Plan Check: The mitigation measure will be incorporated into the design drawings or contract special provisions prior to awarding a construction contract.

Pre-Construction: The mitigation measure will be implemented before beginning construction of the project component.

Construction: The mitigation measure will be implemented during construction.

Operations: The mitigation measure will be incorporated into the ongoing operation of the project component. Continued implementation is to be ensured by incorporating the measure into the operational procedures for the component.

Responsibility for Implementing the Mitigation Measure:

Project Managers: The Sonoma County Department of Transportation and Public Works will designate a Project Manager for each project component. The Project Manager will be responsible for overseeing the design and construction of the component. During the plan check, pre-construction, and construction stages, the Project Manager will be responsible for implementing the appropriate mitigation measures, and will sign the appropriate line of the Mitigation Monitoring Plan as each mitigation measure is implemented.

Site Operations Manager: The Sonoma County Department of Transportation and Public Works will designate a Site Operations Manager, who will be responsible for the overall operation of the Central Disposal Site. The Site Operations Manager will be responsible for implementing the mitigation measures that are designed for the operational stage, and will sign the appropriate lines of the Mitigation Monitoring Plan when procedures are in place to implement those mitigation measures.

Environmental Specialist: The Sonoma County Permit and Resource Management Department will designate an Environmental Specialist for each project component. The Environmental Specialist will review the project plans and specifications with the Project Manager before the Department of Transportation and Public Works advertises for construction bids for that component. The purpose of this review will be to ensure that the responsibility for completion of the mitigation measures has been assigned and the plans and specifications incorporate the appropriate mitigation measures.

Record of Compliance:

Each Project Manager will have a copy of the Mitigation Monitoring Plan, and will record implementation of the mitigation measures that apply to the component for which they are responsible. At completion of construction, the Project Manager will forward the Mitigation Monitoring Plan to the Site Operations Manager, with an interim copy to the Environmental and Comprehensive Planning Division of the Permit and Resource Management Department.

The Site Operations Manager will record implementation of the appropriate measures and transmit the Mitigation Monitoring Plan to the Environmental and Comprehensive Planning Division of the Permit and Resource Management Department.

The Environmental and Comprehensive Planning Division will keep the signed copies of the Mitigation Monitoring Plan received from the Project Managers and the Site Operations Manager as a record of compliance.

CENTRAL DISPOSAL SITE IMPROVEMENT PROGRAM
MITIGATION MONITORING PROGRAM

TABLE 1 - APPLICABILITY OF MITIGATION MEASURES

MITIGATION MEASURE	PROJECT COMPONENT(S)
GEOLOGY	
1. Perform further geologic investigation of the fault near the West Canyon to determine whether it is active, then modify the landfill design if necessary to provide adequate setback from the fault.	Landfill Expansion, West canyon only
2.Incorporate design features into the West Canyon expansion similar to those proposed for the East Canyon landfill.	Landfill Expansion, West canyon only
3.Incorporate grading features into the West Canyon expansion similar to those proposed for the East Canyon landfill.	Landfill Expansion, West canyon only
4.Revise the Storm Water Pollution Prevention Plan to include erosion control for all facilities on the Central Disposal Site.	All Components
5. Include the western part of the Central Disposal Site in the revised Storm Water Pollution Prevention Plan.	Landfill Expansion, both canyons
WATER	
1a. Empty both leachate ponds by October 1 each year;	Landfill Expansion, both canyons
1b. Monitor leachate ponds, maintain 2 foot freeboard	Landfill Expansion, both canyons
1c. Treat leachate to remove heavy metals as needed to meet disposal standards of the wastewater treatment plant	Landfill Expansion, both canyons
2. Monitor the water quality in the East Canyon expansion underdrain for contaminants and, if detected, divert the water to a leachate pond and handle it in the same way as leachate.	Landfill Expansion, East canyon only
3. Develop Spill Prevention Plan	All Components
4. Expand the ground water monitoring system as needed for the landfill expansion areas prior to placing waste in expansion areas	Landfill Expansion, both canyons
5. Expand the gas monitoring system as needed for the landfill expansion areas prior to placing waste in expansion areas	Landfill Expansion, both canyons
6a. Prohibit blasting within 25 feet of landfill, and bore holes to be no larger than 4 inches in diameter	Landfill Expansion, both canyons
6b. Blasting to use scaled distance of 10 with respect to nearest area containing buried refuse. Monitor blasts within 100 feet of refuse.	Landfill Expansion, both canyons
6c. Prohibit blasting within 25 feet of new landfill liner. Blasting to use scaled distance of 10 with respect to nearest part of liner. Monitor blasts within 100 feet of liner.	Landfill Expansion, both canyons
6d. Prohibit blasting within 25 feet of gas or leachate pipes. Blasting to use scaled distance of 10 with respect to nearest pipes. Monitor blasts within 100 feet of pipes.	Landfill Expansion, both canyons

MITIGATION MEASURE	PROJECT COMPONENT(S)
6e. Blasting to use scaled distance of 10 with respect to nearest part of leachate storage pond. Monitor blasts within 150 feet of pond.	Landfill Expansion, both canyons
6f. Prohibit blasting within 25 feet of monitoring wells. Blasting to use scaled distance of 10 with respect to nearest monitoring well. Monitor blasts within 100 feet of wells.	Landfill Expansion, both canyons
AIR QUALITY	
1. Prepare a dust control plan prior to construction and implement during construction and operation of project components.	All Components
2a. Restrictions on construction equipment to reduce NO_X emissions	All Components
2b. Incentives for use of electric motors or natural gas fuel reduce NO_X emissions	All Components
2c. Use water-resistant explosives if water present in bore holes. Use at least 5.7% fuel oil in explosive.	Landfill Expansion, both canyons
3a. Reduce ROG emission by continuously reviewing the landfill gas collection system to incorporate the latest technology to minimize the release of landfill gas to the atmosphere	Landfill Expansion, both canyons
3b. Limit ROG emissions by monitoring the soil bioremediation facility to ensure average contamination level in any year does not exceed 700 parts per million.	Soil Bioremediation Facility
4a. Minimize potential for landfill odors by maintaining an adequate stockpile of cover material to ensure that refuse can be covered each day.	Landfill Expansion, both canyons
4b. Conduct monthly inspections of landfill for surface cracks.	Landfill Expansion, both canyons
5. Maintain equipment on-site that will allow control of odors by adjusting pH of the leachate in the ponds.	Landfill Expansion, both canyons
6. Control soil bioremediation odors by allowing only additives that do not have a strong odor, such as finished compost	Soil Bioremediation Facility
PUBLIC SAFETY	
1a. Restrict blasting to period from 4:30 PM to 5:30 PM. Monitor bore holes for methane before loading explosives, use special explosives if methane exceeds 1%.	Landfill Expansion, both canyons
1b. The HHW facility will have an isolation container where potentially explosive materials can be contained until an emergency response team arrives to take charge of the materials.	Household Hazardous Waste Facility
2 Reduce potential for vehicle damage to gas fuel facility by including protective devices such as guard rails and bollards around the facility	Gas Fuel Facility
3. Implement safety measures at the gas fuel facility including: training for users; availability of fire fighting equipment; preventative maintenance, including periodic inspections of the facility	Gas Fuel Facility

MITIGATION MEASURE	PROJECT COMPONENT(S)
4. Prepare a new comprehensive fire prevention plan prior to operating any new facilities.	All Components
5a. Extend the existing measures to control birds at the landfill to the new landfill expansion areas.	Landfill Expansion, both canyons
5b. Decrease availability of suitable habitat for rodents by not using landscaping plants such as ivy that provide rodent nesting habitat	Operational Improvements
5c. Remove mosquito breeding habitat	Landfill Expansion, both canyons
6a. Revise emergency response/evacuation plans	Landfill Expansion, Household Hazardous Waste Facility, Gas Fuel Facility
6b. Expand emergency response training	All Components
6c. Improve local effectiveness of County's CAN system	All Components
7a. Restrict blasts to 200 pounds of explosive per bore hole	Landfill Expansion, both canyons
7b. Incorporate measures to control air blast	Landfill Expansion, both canyons
TRAFFIC	
1a. Restrict new truck traffic associate with new or expanded facilities so that peak hour traffic at the Stony Point/Mecham intersection is not increased over existing levels	All Components
1b. Pay a traffic mitigation fee, including share of cost of Stony Point/Mecham signal	Landfill Expansion, Household Hazardous Waste Facility
2a. Restrict new truck traffic associate with new or expanded facilities so that peak hour traffic at the Stony Point/Roblar intersection is not increased over existing levels	All Components
2b. Pay a traffic mitigation fee, including share of cost of Stony Point/Roblar signal	Landfill Expansion, Household Hazardous Waste Facility
3a. Pay a traffic mitigation fee, including share of cost of Stony Point/West Railroad signal	Landfill Expansion, both canyons
3b. Pay a traffic mitigation fee, including share of cost of Stony Point/Pepper signal	Landfill Expansion, both canyons
4. Install an all-way stop at the Hwy 101 offramp/W. Railroad Ave intersection or post advisory speed signs.	Landfill Expansion, Household Hazardous Waste Facility
5a. Install a 35 mph advisory speed sign for northbound Mecham Road	Landfill Expansion, Household Hazardous Waste Facility, Gas Fuel Facility, Soil Bioremediation Facility
5b. Institute a driver education program for commercial refuse haulers to alert them to safety concerns.	Landfill Expansion, Household Hazardous Waste Facility, Gas Fuel Facility, Soil Bioremediation Facility
6. Repair Hammel Road pavement as needed to maintain the road in a safe and passable condition.	Landfill Expansion, both canyons

MITIGATION MEASURE	PROJECT COMPONENT(S)
7. Construct vehicle turn-around areas at several Mecham Road driveways, or widen road shoulder near the driveways.	Landfill Expansion, Household Hazardous Waste Facility, Gas Fuel Facility, Soil Bioremediation Facility
8. Increased traffic enforcement	Landfill Expansion, both canyons
NOISE	
1a. Construct 12 foot berm at between rock processing equipment and south property line.	Landfill Expansion, East Canyon only
1b. Construct 12 foot berm at the base of the West Canyon landfill with a fence on top for a total height of 22 feet. Construct 12 foot berm between rock processing equipment and south property line. install or pay for installation of noise-proofing of the residences at 602 Hammel Road.	Landfill Expansion, West Canyon only
1c. Install or pay for installation of noise-proofing of the residences at 602 Hammel Road.	Landfill Expansion, West Canyon only
2a. Restrict construction activities to 7 AM through 5 PM on weekdays and 9 AM through 5 PM on weekends and holidays.	Household Hazardous Waste Facility, Gas Fuel Facility, Operational Improvements
2b, 2c, & 2d. Require all construction equipment to have proper mufflers; Locate equipment and materials storage areas as far from residences as practical; Include noise as an evaluation criteria during facility design and when purchasing new equipment.	All Components
3a. Provide sound-proofing to 11 Mecham Road residences if needed to attain interior noise level of 45 dB or less	Landfill Expansion, both canyons
3b. Construct 6-foot high solid fence along property lines of 11 Stony Point Road residences	Landfill Expansion, both canyons
BIOTIC	
1. Create new wetlands and enhance existent wetlands so that there is no net loss of wetland function or habitat value	Landfill Expansion, Operational Improvements
2. Plant at least 0.5 acres of riparian vegetation along an intermittent creek that presently lacks such vegetation.	Landfill Expansion, East canyon only
3. Replace red-legged frog habitat	Landfill Expansion, East canyon only
4. Protect red-legged frogs during construction	Landfill Expansion, East canyon only
5. Avoid disturbing active raptor nests	Landfill Expansion, both canyons
LAND USE	
1a & 1b. By easement or deed restriction, retain portion of land to be acquired in agricultural use; by easement or deed restriction, dedicate an unused portion of the landfill parcel for permanent agricultural use	Household Hazardous Waste Facility, Operational Improvements

MITIGATION MEASURE	PROJECT COMPONENT(S)
VISUAL	
1. Plant trees near Mecham/Hammel intersection	Landfill Expansion, East canyon only
2. Continue the existing litter control program and expand it to include the East and West Canyon landfills	Landfill Expansion, both canyons
3. Prepare and implement a landscape and screening plan for any new structures that would be visible from off-site	Household hazardous Waste Facility, Gas Fuel Facility, Operational Improvements
CULTURAL RESOURCES	
1. An archaeologist will monitor the construction sites of all project components except the soil bioremediation facility	Landfill Expansion, both canyons, Household Hazardous Waste Facility, Gas Fuel Facility, Operational Improvements
2. A paleontologist will monitor the bedrock excavations in the East and West Canyons	Landfill Expansion, both canyons

LANDFILL EXPANSION
RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the plans and specifications with the Project Manager prior to the construction contract being awarded to assure that the responsibility for completion of the mitigation measures has been assigned and that the plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ Date _____

Comments:

SPECIAL NOTES FOR BLASTING-RELATED MITIGATION MEASURES

These notes apply to the following mitigation measures:

Water Resources Mitigation Measures 3 and 6a through 6f
Air Quality Mitigation Measures 1 and 2c
Public Health and Safety Mitigation Measures 1a, 7a, and 7b

To provide for technically qualified and practical oversight of the blasting, the following procedure will be used to monitor blasting-related mitigation measures. The Project Manager or staff designated by the Project Manager will have the primary monitoring responsibility.

A **blasting contractor** will conduct the blasting. This person will be a blaster licensed in the State of California.

The County will retain a **blasting consultant** (not the same person as the blasting contractor). The blasting consultant will advise the County during the preparation of the specifications for the blasting contract to ensure that the mitigation measures are included. The consultant will train at least two Integrated Waste Division staff persons and a staff person from the Local Enforcement Agency (LEA) to have the knowledge and skills necessary to ensure that the blasting complies with the mitigation measures. In addition, the blasting consultant will advise the County's engineering firm during the preparation of the contract documents for the landfill expansion construction to ensure that the contract requires proper coordination between the blasting contractor and the landfill expansion contractor.

The blasting consultant will perform periodic on-site compliance audits of the blasting operations to ensure that all blasting is being conducted in strict accordance with blasting control specifications, and will prepare inspection reports summarizing the blasting compliance.

Two trained Integrated Waste Division staff persons (a primary and an alternate) will monitor

the blasting operations to ensure compliance with the mitigation measures. The LEA staff will monitor blasting activities independently from Integrated Waste Division staff, at LEA discretion.

Geology Mitigation Measure No. 1. Additional trenching and investigations will be conducted by qualified geologists at the Dunham fault in the West Canyon to establish whether the fault is active or not by state criteria. If this investigation demonstrates to the satisfaction of the Regional Water Quality Control Board that the fault is inactive, the conceptual design can be developed into a final design for the West Canyon expansion. If the fault is found to be active or a clear determination cannot be made, the expansion design will be modified so that a minimum distance of 200 feet is established between the fault and the expansion area.

Time of Implementation: Plan Check (prior to final design of West Canyon landfill expansion). This measure does not apply to the East Canyon landfill expansion.

Responsibility: The Project Manager will confirm that the required geotechnical investigations have been completed, that copies have been submitted to the Regional Water Quality Control Board and LEA, and the RWQCB is satisfied that the investigations have shown the fault to be inactive.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 2. The West Canyon design will be prepared by a qualified engineering firm. The design will incorporate features similar to those proposed for the East Canyon expansion, or other features deemed to be adequate by the consulting engineer and the Regional Water Quality Control Board, to prevent significant damage to the landfill from earthquake-induced ground shaking of 0.32 g and from slope failures induced by earthquakes or other causes.

Time of Implementation: Plan Check (prior to construction of West Canyon landfill expansion) and Construction. This measure does not apply to the East Canyon landfill expansion.

Responsibility: The Project Manager will confirm that the design features have been incorporated into the plans for the West Canyon expansion, that the plans were submitted to the Regional Water Quality Control Board and LEA, and that the design features were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 3. The West Canyon grading plan will incorporate the grading procedures identified for the East Canyon design to prevent slope failures. These include maximum full slopes of 3:1 (horizontal:vertical) with 20 foot wide benches every 50 feet in vertical height. The embankments of new sedimentation basins will be constructed so that the factor of safety is greater than 1.5.

Time of Implementation: Plan Check (prior to construction of West Canyon landfill expansion) and Construction. This measure does not apply to the East Canyon landfill expansion.

Responsibility: The Project Manager will confirm that the grading procedures have been incorporated into the plans and were carried out during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 4. The Storm Water Pollution Prevention Plan will be revised to address all facilities existing and proposed for the Central Disposal Site. The plan will be submitted to the Regional Water Quality Control Board, and at the minimum will include:

A. A description of the critical features of the erosion control system, including the sediment ponds, and drainage ways, along with a description and schedule for routine maintenance of these features.

B. A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to constructing the East or West Canyon landfill expansions, and prior to constructing the household hazardous waste facility or other facilities proposed for the upper part of the East Canyon drainage.

C. A requirement to vegetate side slopes and waste-fill slopes. Temporary and permanent vegetative cover will be established as soon as possible on side slopes and waste-fill slopes. To protect the slopes prior to vegetation establishment, a mulch, consisting of straw or wood fiber will be applied at the time of seeding. a tackifier shall be applied with the mulch as needed to prevent loss of the mulch due to wind or water movement. Sample specifications for revegetating disturbed areas shall be included, including a description of the types of areas to be revegetated, the equipment and procedures to be used, and the time of year the seeding is to be done. For areas where an erosion potential exists but it is not practical to establish vegetation, specifications for placing mulch or temporary covers shall be included.

D. Specifications for construction features to reduce erosion. These shall include benches on slopes to intercept sheet flow and shorten drainage paths, protective linings (e.g. riprap, concrete, grass, erosion control mats) on interim and final drainage ways, and energy dissipators at inlets and outlets of sediment ponds and at outlets of culverts."

E. Best Management Practices for construction and operation of the various facilities and the landfill expansion areas. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property.

F. Specifications for watering roads, borrow areas, and construction areas to control wind erosion.

G. An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.

H. A schedule for winterizing the site that will ensure that critical work is done prior to October 15 each year.

Time of Implementation: Plan Check, Pre-construction, Construction, and Operations

Responsibility: The Project Manager will confirm that the Stormwater Pollution Prevention Plan has been revised and submitted to Regional Water Quality Control Board before construction of the facility. The Project Manager will confirm that contract specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the measures in the plan were implemented during construction. The Operations Manager will confirm that the plan has been incorporated into the facility's operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 5. The Storm Water Pollution Prevention Plan will include Best Management Practices specifically for grading in the western part of the Central Disposal Site in areas that do not drain into the sediment control system. This will include measures to reduce erosion, measures to trap sediment before runoff is discharged, and measures to revegetate graded areas.

Time of Implementation: Preconstruction and Operations

Responsibility: The Project Manager will confirm that the Storm Water Pollution Prevention Plan has been revised as needed to comply with this measure. The Site Operations Manager will confirm that the plan has been incorporated into the operating procedures for the landfill.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 1a. The Integrated Waste Management Division will empty both leachate ponds before October 1 of each year. The completion of this action will be reported to the RWQCB before October 15 each year.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 1b. The Integrated Waste Division will monitor the leachate levels in both ponds at least once each day between October 1 and May 1. Leachate will be removed from the pond as needed to ensure that the 2-foot freeboard will be maintained at all times.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 1c. The Integrated Waste Division will identify specific water treatment equipment that will reduce concentrations of heavy metals to levels acceptable by the public wastewater treatment plant to accept the leachate for disposal. The Integrated Waste Division will install whatever fittings are needed to allow rapid installation of the water treatment equipment at the leachate ponds, and will keep on site all pipes, hoses, pumps, or other equipment that is needed to install the water treatment equipment. Each year the Integrated Waste Division will have the necessary water treatment equipment on site by December 1, and will keep the equipment on site and ready to use at least until April 30 the following year. The Integrated Waste Division will test the leachate and treat it as needed to meet the requirements for disposal.

Time of Implementation: Construction and Operations. The fittings will be installed prior to placing any waste in the landfill expansion areas. The treatment equipment will be available each year for the life of the project or until alternative leachate management techniques are developed and approved by the RWQCB.

Responsibility: The Site Operations Manager will confirm that the necessary fittings are installed and that the necessary equipment is available. The Site Operations Manager will confirm that the site operational procedures have been modified to include this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 2. The Integrated Waste Division will implement a groundwater self-monitoring and reporting program at the East Canyon expansion area. This will consist of detection, monitoring, evaluation, and corrective action programs. Under the detection and monitoring program, groundwater from the underdrain system will be sampled on a quarterly basis at the point of its discharge to the ground surface, and will be analyzed for pH, chloride, nitrate, sulfate, total dissolved solids, and VOCs. If contaminants are detected, sampling will be conducted on a monthly basis to confirm the presence of constituents of concern in the groundwater. If an impact is confirmed, the groundwater in the underdrain system will not be discharged to the creek, but will be handled in the same way as leachate. The water will be diverted into a leachate pond, or hauled to a public wastewater treatment plant, or treated on-site. When contaminants are detected, the frequency of water quality testing will be increased to once each month, or to any other frequency determined necessary by the RWQCB.

Time of Implementation: Operations. This measure will be in place when refuse is placed in the East Canyon, and will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 3. Prior to construction, a spill prevention plan will be prepared for each project component. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. The plan will require that any explosives spilled during the loading of the blasting holes be cleaned up prior to detonating the explosives. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. This plan will be part of the Storm Water Pollution Plan required by Geology Mitigation Measure 4.

Time of Implementation: Plan Check, Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the plan was prepared and that the project specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the plan was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 4. To ensure that the landfill water quality monitoring system is adequate to detect contamination of surface or ground water that could result from the East or West Canyon expansion areas, the water monitoring system for the site will be expanded. A qualified hydrogeologist will review the system and recommend additional monitoring stations to adequately include the landfill expansion areas and leachate ponds. The final selection of monitoring stations will be developed in consultation with the RWQCB. Monitoring wells for an expansion area will be in place before refuse is placed in that expansion area.

Time of Implementation: Construction, Operations

Responsibility: The Project Manager will confirm that the monitoring system has been designed and the design has been reviewed by the RWQCB. The Site Operations Manager will confirm that the monitoring system is in place prior to placing wasted in the landfill expansion area.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Water Resources Mitigation Measure No. 5. To ensure that the landfill gas monitoring system is adequate to detect gas migration from the East or West Canyon expansion areas before it can travel off-site, the gas monitoring system for the site will be expanded by adding gas monitoring stations around the perimeter of the expansion areas. The final selection of monitoring stations will be developed in consultation with the California Integrated Waste Management Board and the Bay Area Air Quality Management District. The gas monitoring stations for an expansion area will be in place before refuse is placed in that expansion area.

Time of Implementation: Construction, Operations

Responsibility: The Project Manager will confirm that the monitoring system has been designed and the design has been reviewed by the CIWMB and the BAAQMD. The Site Operations Manager will confirm that the monitoring system is in place prior to placing wasted in the landfill expansion area.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Cumulative Water Resources Mitigation Measure C. Contractors working on the Central Disposal Site will be prohibited from blasing simultaneously at two or more locations. Blasting at more than one location may occur on the same day, but blasting will be coordinated so that blasts do not occur within 10 minutes of each other.

Time of Implementation: Plan Check, Pre-construction, and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the second page of this monitoring program. The Project Manager will confirm that the contract specifications for the blasting include language requiring contractor compliance with the mitigation measures. The Project Manager will confirm that the blasting was done in conformance to the mitigation measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6a. Blasting will not be done at locations that are closer than 25 feet from the nearest part of the existing Central Canyon landfill that contains buried refuse. Blasting will be done in bore holes that are no larger than four inches in diameter.

Time of Implementation: Plan Check, Pre-construction, and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the second page of this monitoring program. The Project Manager will confirm that the contract specifications for the blasting include language requiring contractor compliance with the mitigation measures. The Project Manager will confirm that the blasting was done in conformance to the mitigation measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6b. All blasts for the East and West Canyon landfill construction will be designed so that the maximum weight of explosive per delay will not exceed the amount given in the following formula: $Wt = (D \div 10)^2$, where Wt is the maximum weight (lbs) of explosives per delay and D is the distance (feet) between the blast and the nearest area containing buried refuse. All blasts within 100 feet of buried refuse will be seismically monitored. If the monitoring indicates that ground motion at the landfill exceeds 7.5 inches per second, the maximum weight of explosive per delay will be reduced as needed to reduce the resultant ground motion to 7.5 inches per second.

The Integrated Waste Division will perform additional groundwater monitoring for the existing landfill during those years in which blasting is expected to take place in the East or West Canyon landfill expansion areas. The additional monitoring will be determined in consultation with the North Coast Regional Water Quality Control Board.

Time of Implementation: Plan Check and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications include language requiring contractor compliance with the measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6c. Blasting will not be allowed closer than 25 feet from the East Canyon landfill liner. All blasts will be designed so that the maximum weight of explosive per delay will not exceed the amount given in the following formula: $Wt = (D \div 10)^2$, where Wt is the maximum weight (lbs) of explosives per delay and D is the distance (feet) between the blast and the nearest part of the East Canyon landfill liner. All blasts within 100 feet of the East Canyon landfill liner will be seismically monitored. If the monitoring indicates that ground motion at the liner exceeds 7.5 inches per second at the liner, the maximum weight of explosive per delay will be reduced as needed to reduce the resultant ground motion to 7.5 inches per second.

Time of Implementation: Plan Check and Construction

Responsibility: The Project Manager will confirm that the project specifications include language requiring contractor compliance with the measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6d. Blasting will not be allowed closer than 25 feet from buried gas or leachate collection pipes. All blasts will be designed so that the maximum weight of explosive per delay will not exceed the amount given in the following formula: $Wt = (D \div 10)^2$, where Wt is the maximum weight (lbs) of explosives per delay and D is the distance (feet) between the blast and the nearest pipe. All blasts within 100 feet of the pipes will be seismically monitored. If the monitoring indicates that ground motion at the pipes exceeds 7.5 inches per second at the pipes, the maximum weight of explosive per delay will be reduced as needed to reduce the resultant ground motion to 7.5 inches per second.

Time of Implementation: Plan Check and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications include language requiring contractor compliance with the measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6e. All blasts will be designed so that the maximum weight of explosive per delay will not exceed the amount given in the following formula: $Wt = (D \div 10)^2$, where Wt is the maximum weight (lbs) of explosives per delay and D is the distance (feet) between the blast and the nearest leachate storage pond. All blasts within 150 feet of the leachate storage pond will be seismically monitored. If the monitoring indicates that ground motion at the pond exceeds 7.5 inches per second, the maximum weight of explosive per delay will be reduced as needed to reduce the resultant ground motion to 7.5 inches per second.

Time of Implementation: Plan Check and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications include language requiring contractor compliance with the measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measure 6f. Blasting will not be allowed closer than 25 feet from any monitoring well. All blasts will be designed so that the maximum weight of explosive per delay will not exceed the amount given in the following formula: $Wt = (D \div 10)^2$, where Wt is the maximum weight (lbs) of explosives per delay and D is the distance (feet) between the blast and the nearest part of the East Canyon landfill liner. All blasts within 100 feet of the well will be seismically monitored. If the monitoring indicates that ground motion at the well exceeds 7.5 inches per second at the well, the maximum weight of explosive per delay will be reduced as needed to reduce the peak ground motion to 7.5 inches per second.

Time of Implementation: Plan Check and Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications include language requiring contractor compliance with the measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 1. The Integrated Waste Division will prepare and implement a plan to reduce dust emissions from construction and operation of the facilities at the Central Disposal Site. The plan will be in place prior to beginning construction of any of the facilities. At a minimum, the plan will contain the following features:

A. Construction areas will be watered as needed to control dust.
B. Water or other dust suppressants will be used on unpaved haul roads.
C. Watering will be done more frequently when wind speeds exceed 15 mph.
D. Dirt stockpiles will be watered or otherwise protected with a dust suppressant.
E. Vehicle speeds will be limited to 15 mph on unpaved haul roads.
F. Integrated Waste staff will monitor the condition of the main access road to the site, including its intersection with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.
G. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.
H. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.
I. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.
J. The rock crusher shall be equipped with a spray mister, or incorporate some other equally effective measure to control dust.

Time of Implementation: Plan Check, Construction, and Operation

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications include language requiring contractor compliance with the dust control measures, and that the measures were implemented during construction. The Operations Manager will confirm that the dust control measures have been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2a. Contracts for construction and operation of the landfill expansion and other facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the contract specifications contain language requiring the contractor to comply with this measure, and that the measure was implemented during construction. The Site Operations Manager will confirm that the measure has been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2b. Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment. When the landfill gas fuel facility has been constructed, subsequent contracts for operations of the facilities will also include incentives for converting internal combustion engines to use natural gas fuel.

Time of Implementation: Plan Check and Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for preparing contracts for facility operations.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2c: To prevent excessive NO_X emissions, all blasting in the East or West Canyon landfill expansions will incorporate the following measures:

(1) The blasting contractor shall use water resistant explosives in any bore hole that contains water. Non-water resistant explosives may be used above the wet areas of bore holes, provided that water resistant explosives are used in the wet areas and the bore hole is sealed above the wet area so that the non-water resistant explosive remains above the wet area.

(2) Blended ammonium nitrate/fuel oil blasting agents shall contain at least 5.7% fuel oil by weight.

Time of Implementation: Plan Check, Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the second page of this monitoring program. The Site Operations Manager will confirm that the project specifications require the contractor to comply with this measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 3a. Future landfill gas collection systems will be designed to minimize the amount of uncontrolled gas emissions. To ensure that the latest information and technology is considered in the design, the Integrated Waste Division will have a qualified consultant perform a biennial review of the Central Disposal Site's plan for expansion of the landfill gas collection system, with recommendations for changes that would include appropriate new and improved gas collection technology. The consultant's recommendations will be submitted to the Bay Area Air Quality Management District along with plans for proposed expansions of the gas collection system whenever the County must obtain from the District an Authority to Construct for the collection system expansions.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that future landfill gas collection system expansions comply with this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 3b. Not applicable to this component

Air Quality Mitigation Measure No. 4a. The Integrated Waste Division will maintain stockpiles of cover soil and other cover materials to ensure that there will be an adequate supply of materials to cover refuse every day, even during extended periods of rain.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 4b. The Integrated Waste Division will conduct monthly inspections of the landfill cover to detect surface cracks. Should cracks (potential odor sources) be detected, they will be repaired immediately.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 5. The Integrated Waste Division will acquire and maintain on-site equipment and materials that will allow them to adjust the pH of the water in the leachate ponds. The ponds will be monitored by Integrated Waste Division staff, and the pH will be adjusted when staff detects an odor problem or when the cause of any odor complaint appears to be the leachate ponds.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the landfill operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 6: Not applicable to this component

Public Health and Safety Mitigation Measure No. 1a. Blasting shall be limited to the hours of 4:30 PM to 5:30 PM, when the public is not present. A safety setback perimeter, consistent with OSHA and MSHA requirements, shall be established around the blast site with cones. Prior to a blast, all access points to the blasting site shall be blocked by signs and/or sentries to assure a safe clear zone around the blast. Detonations shall not be initiated until the landfill manager indicates that all affected personnel have been notified.

Prior to placing explosives in the blast holes, methane detecting equipment will be used to determine whether methane gas is present at the collars of at least 15 blast holes that are nearest the areas of the landfill that contain buried refuse. The methane detecting equipment shall meet the standards set by the Mine Safety and Health Administration in CFR 30, Part 22 - Portable Methane Detectors, Section 22.6. If the monitors detect methane in concentrations exceeding 1.0%, the blasting contractor shall use only explosives especially formulated for safe use in gassy environments.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the project specifications require the contractor to comply with this measure, and that the measure was implemented during construction. The Operations Manager will confirm that procedures have been established to ensure coordination between the blasting contractor and site operations personnel.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 1b, 2, and 3: Not applicable to this component

Public Health and Safety Mitigation Measure No. 4. Prior to construction of any new building on the Central Disposal Site, plans shall be reviewed for compliance with applicable fire codes by the Sonoma County Permit and Resource Management Department Building Inspection Division and the Rancho Adobe Fire District.

The Integrated Waste Division will consult with the Rancho Adobe Fire District and will revise the existing fire prevention plan to include the proposed new or expanded facilities. Upon approval of the fire prevention measures by the Rancho Adobe Fire District, the fire prevention plan will be included in the Joint Technical Document. At a minimum the plan will include descriptions of the following:

1. Amount of water storage available for fire fighting.
2. Numbers, locations, and description of all fire hydrants and fire fighting equipment on the site.
3. Procedures for fighting a fire on site, including operation of fire extinguishers, hoses, retardants, and use of water trucks and heavy equipment to extinguish garbage fires.
4. Responses to fire incidents, including procedures for denying entry, evacuating the site, notifying emergency responders, and notifying nearby residents.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the building plans have been reviewed for compliance with applicable fire codes by PRMD and the Rancho Adobe Fire District. The Project Manager will confirm that the project was constructed to conform the applicable fire codes. The Site Operations Manager will confirm that the fire prevention plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the landfill incorporate the applicable portions of the plan.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 5a. The Integrated Waste Division shall extend the program of measures to control scavenging birds to the East and West Canyon expansion areas. Measures shall include using wires or exclusion structures over leachate ponds, using chemical repellants around areas of standing water, using noise-makers or other devices to frighten birds from the landfill, or other measures recommended by the Local Enforcement Agency.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 5b. Not applicable to this component

Public Health and Safety Mitigation Measure No. 5c. The Central Disposal Site Operations Manager will monitor areas containing standing water and take such actions as necessary to ensure that they do not become breeding areas for mosquitos. Such actions may include grading areas to drain, using biological controls, or applying insecticides in accordance with applicable regulations.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6a. The Integrated Waste Division will consult with the Sonoma County Department of Emergency Services and will revise the existing emergency response and evacuation plan to include responses to potential emergencies involving the household hazardous waste, gas fuel facility, and the blasting and rock processing related to construction of the East and West Canyon landfill expansions. This plan must be approved by the Department of Emergency Services prior to use of the new facilities or implementation of blasting or rock processing operations. Upon approval of the plan, it will be incorporated into the Joint Technical Document for the Central Disposal Site. Items to be described in the plan are described below.

Landfill construction. The Integrated Waste Division will develop a plan or modify the existing plan to detail emergency response procedures for potential accidents related to construction activities in the proposed East and West Canyon landfill expansion. At the minimum, the plan will address potential responses to blasting-related accidents, including those that could occur after daily closure of the landfill, and accidents related to special equipment or operations, such as the rock drilling or rock processing.

Household Hazardous Waste Facility. In accordance with State and Federal laws, the Integrated Waste Division will develop an operation plan, worker health and safety plan, and an emergency response plan. The operation plan will detail handling procedures for hazardous wastes, procedures for handling sensitive materials such as explosives, preventative and safety measures, daily and periodic safety inspections for safety equipment, reporting and tracking methods, and personnel training requirements. The worker health and safety plan will also encompass training requirements, safety equipment and inspections, signs and warning systems. The emergency response plan will detail responses to potential spills, releases, receipt of sensitive materials, fires, and explosions. This will include the appropriate agencies to notify, procedures for emergency isolation and management of the site, identification of the waste involved, notification of the surrounding community (if needed), evacuation of the site (and surrounding community, if needed), and the appropriate hazardous materials clean-up activity.

Landfill Gas Fuel Facility. The Integrated Waste Division will develop a plan that will detail emergency shut-down procedures, worker training, inspections, maintenance of safety devices, notification procedures, and site evacuation procedures. This plan will be prepared after consultation with the Rancho Adobe Fire District.

Time of Implementation: PreConstruction and Operations

Responsibility: The Site Operations Manager will confirm that the emergency response plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure 6b. The Integrated Waste Division will expand the existing emergency response training program that the landfill workers now undergo each year. The expanded program will include on-site mock incidence training sessions once a year. In addition to the landfill workers, the Rancho Adobe Fire District and other emergency responders will be invited to participate in these training sessions. The goal of the training sessions will be to familiarize workers and emergency services with emergency situations that may be unusual because of the types of facilities that will be operated at the site.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6c. The Integrated Waste Division will assist in improving the effectiveness of the County's Community Alert Network in the vicinity of the landfill. This will be done by identifying addresses within a one-mile radius of the Central Disposal Site that may not be in the Community Alert Network, and sending a mailer to those addresses. The mailer will include a form that the resident can fill out and return to the County if they wish to have their phone number added to the Community Alert Network.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been implemented prior to operation of any of the new or expanded facilities.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure 7a: All blasts will be designed so that the maximum weight of explosive per delay will not exceed 200 pounds, which will ensure that the peak particle velocity at the nearest off-site structures will be less than 0.5 inches per second.

Time of Implementation: Plan Check, Construction

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications require the contractor to comply with this measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 7b: The blasting contractor shall be required to incorporate the following measures to control air blast:

The contractor shall use only 3/8 to 1/2 inch clean crushed stone for stemming all explosive charges. The minimum stemming height will exceed eight feet and stemming will be lightly tamped with a loading pole while it is poured in holes to ensure that no air gaps occur in the stemming column.

The contractor shall examine all exposed rock surfaces to ensure that the minimum burden distance exists between the bore hole and the rock face.

The drill operator shall keep a drilling log that details any weak or unusual ground conditions encountered while drilling blast holes. Drill logs will identify blast holes by number on a diagram. The logs shall indicate hole depth, the presence and depth of water, and describe the location of any weak zones or voids intercepted by the blast holes. A copy of the log shall be submitted to the blasting contractor at least one hour before any blast holes are loaded with explosive.

If open cracks or weak seams are found during drilling, the blasting contractor shall make necessary blast design adjustments to isolate the explosive charges from the weak areas.

Whenever practical, the contractor should avoid blasting when heavy cloud cover is forecast for the time of blasting. If windy conditions do occur after shot loading has commenced, the contractor should make all possible effort to fire the blast when wind is blowing in a direction away from the nearest residence.

Overpressure shall be monitored at the nearest residence (or at the site property boundary nearest the blast area if the adjacent property owner will not permit monitoring). If the overpressure is greater than 133 dB-L, the blasting contractor shall make adjustments to the next blast to ensure that overpressure at the nearest residence does not exceed 133 dB-L. Such adjustments may include additional measures to increase confinement, or reducing the weight of explosive per blast hole.

Time of Implementation: Plan Check, Operations

Responsibility: Monitoring for this measure must comply with the "Special Notes for Blasting-Related Mitigation Measures" on the first page of this compliance record. The Project Manager will confirm that the project specifications require the contractor to comply with this measure, and that the measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 1a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Mecham intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the construction contracts include language allowing the County to restrict construction traffic during the morning peak hour. The Site Operations Manager will confirm that subsequent contracts with operators also include this language, and that the operational procedures incorporate this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 1b. Prior to construction of the project, the Integrated Waste Division will pay a traffic mitigation feet that will include a fair share cost of installing a traffic signal at the Stony Point/Mecham intersection. At the minimum, the Integrated Waste Division's share will be equal to the ratio of Central Disposal Site traffic on Mecham Road to total traffic on Mecham Road, using projected 2005 volumes from this EIR. The share may be increased if the Road Division of the Department of Transportation and Public Works determines that a greater share is appropriate because of the large amount of truck traffic associated with the Central Disposal Site.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants.

To ensure that funds will be available to install the signal when it is needed, the Integrated Waste Division will provide up to 100% of the cost of design and construction of the signal. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the fair share costs as funds become available.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 2a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Roblar intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the contract specifications prohibit new truck traffic through the intersection, and that the measure was implemented during construction.
Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 2b. Prior to construction of the project, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Roblar intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site traffic impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

If the County-wide traffic mitigation fund is insufficient to install the signal at the Stony Point/Roblar intersection by the time that the Road Division determines that a signal is necessary, the Integrated Waste Division will provide up to 100 percent of the cost of design and construction of the signal. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the Central Disposal Site's fair share as funds become available.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 3a. Prior to construction of the landfill expansion component of the project, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/West Railroad Avenue intersection and any other off-site improvements that would be needed in part because of this project. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site traffic impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 3b. Prior to construction of the landfill expansion component of the project, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Pepper intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site traffic impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

If the County-wide traffic mitigation fund is insufficient to install the signal at the Stony Point/Pepper intersection by the time that the Road Division determines that a signal is necessary, the Integrated Waste Division will provide up to 100 percent of the cost of design and construction of the signal. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the Central Disposal Site's fair share as funds become available.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 4. The Department of Transportation and Public Works will compensate for the limited sight distance at the Highway 101 offramp/West Railroad Avenue intersection by installing an all-way stop at the intersection or posting advisory speed signs or other warning signs on the West Railroad Avenue intersection approaches. This measure shall be implemented prior to construction of the landfill expansion, household hazardous waste facility, or soil bioremediation facility.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5a. The Department of Transportation and Public Works will compensate for the limited sight distance at the Mecham/Wambold intersection by installing a 35 mph advisory speed sign for northbound Mecham Road between the landfill access road and Wambold Lane. This measure shall be implemented prior to construction of any project component other than the operational improvements. The Integrated Waste Division will pay the cost of this installation.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division and that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5b. The Integrated Waste Division will institute a mandatory driver education program for the commercial refuse haulers and any other commercial haulers who regularly pick up or deliver materials to the Central Disposal Site and are subject to control by the County. The program will familiarize the drivers with the speed limits on Mecham Road, areas having borderline sight distance, and the locations of school bus stops. The program will be implemented prior to operation of any project component other than the operational improvements.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the driver's education program has been implemented.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 6. Damage to Hammel Road caused by hauling materials for the landfill expansions or hauling leachate will be repaired as necessary to keep the road in a safe and passable condition. The repairs will be made the Road Division of the Department of Transportation and Public Works or by the Integrated Waste Division. If repairs are made by the Road Division, the Integrated Waste Division will compensate the Road Division for the portion of the repairs that are related to damage caused by this project.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures include periodic inspection of Hammel Road and coordination with the Road Division for repairs to the pavement as needed.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 7. The Department of Transportation and Public Works will either: (1) construct vehicle turn-around areas at the driveways to 301, 303, 305, and 319 Mecham Road; or (2) widen the shoulder of Mecham Road near these driveways to provide more room for residents to turn their cars around before entering the traffic lane. The Integrated Waste Division will pay the cost of these improvements. This measure will be implemented prior to construction of any project component other than the operational improvements.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division and that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 8. The Integrated Waste Division will pay the cost of extra traffic enforcement on the main routes to the Central Disposal Site. This will be done by entering into agreements with the California Highway Patrol and/or the Sonoma County Sheriff whereby the Integrated Waste Division will pay the cost of having off-duty officers perform extra patrols on the roads to enforce traffic laws, including laws requiring covered loads.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the agreements have been made for the additional traffic enforcement.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 1a. A 12-foot high berm will be constructed to break line of sight between the rock hammer and rock crusher used in the East Canyon landfill construction and the southern (Hammel Road) property line. This equipment shall not be operated without such a berm in place.

Time of Implementation: Plan Check, Pre-construction, Construction (East Canyon only)

Responsibility: The Project Manager will confirm that the East Canyon plans and specifications include construction of the berm, and that the berm was constructed prior to operating the rock processing equipment in the East Canyon.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 1b. Before beginning construction of the West Canyon expansion, an earth berm will be constructed at the bottom of the canyon. A solid fence will be constructed on the top of the berm and extending the length of the berm. The total height of berm and fence shall be at least 22 feet. In addition, a 12-foot high berm will be constructed to break line of sight between the rock hammer and rock crusher used in the West Canyon landfill construction and the property line immediately south of the West Canyon. This equipment shall not be operated without such a berm in place.

Time of Implementation: Plan Check, Pre-construction, Construction (West Canyon only)

Responsibility: The Project Manager will confirm that the West Canyon plans and specifications include construction of the berm and fence, and that the berm and fence were constructed prior to beginning earthmoving for the West Canyon expansion area. The Project Manager will confirm that the 12 foot berm was constructed prior to operating the rock processing equipment.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 1c. The Integrated Waste Division will ensure that the residences at 602 Hammel Road can meet the interior noise standard (45 dBA). Provided the owner agrees, the Integrated Waste Division will determine by measurement or calculations whether the residences provide the necessary noise attenuation to meet the 45 dBA standard with the windows closed.

For those residences that cannot meet the standard, the Integrated Waste Division will pay the cost and arrange for the installation of improvements to achieve the necessary sound attenuation. If the owner prefers to install the improvements or select other parties to install the improvements, the Integrated Waste Division will pay the estimated cost of the improvements to the owner. Improvements may include replacing existing windows that face the landfill parcel with laminated glass or other acoustically rated window systems and weatherstripping doors that face the landfill parcel to eliminate acoustical leaks. If necessary to provide fresh air and cooling to maintain a habitable environment in rooms that require closed windows, a mechanical ventilation/cooling system conforming to the requirements of the Uniform Building and Mechanical Codes may be installed. This measure shall be implemented prior to construction of the West Canyon landfill expansion.

Time of Implementation: Pre-construction (West Canyon only)

Responsibility: The Project Manager will confirm that the measure has been implemented prior to beginning earthmoving in the West Canyon expansion area.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2a. Not applicable to the landfill expansion component

Noise Mitigation Measure No. 2b. The Integrated Waste Division will require that all construction vehicles and equipment be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2c. Construction equipment or materials storage areas shall be located as far away as practicable from residences.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure 2d. The Integrated Waste Division will include noise as an evaluation criterion during facility design and when purchasing new equipment and vehicles for use at the Central Disposal Site.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated

into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 3a. The Integrated Waste Division will ensure that the residences fronting Mecham Road that could be significantly impacted by traffic noise caused by the project can meet the interior noise standard (45 dBA Ldn). This measure applies to the following residences:

Assessor's Parcel Numbers	Site Address
24-103-33	1 Everett Road
24-105-1	299 Mecham Road
24-105-2	301 Mecham Road
24-105-3	303 Mecham Road
24-105-4	305 Mecham Road
24-105-32	307 Mecham Road
24-105-33	309 Mecham Road
24-105-35	311 Mecham Road
24-107-21	317 Mecham Road
24-107-28	319 Mecham Road
24-080-20	403 Mecham Road

Provided the owner agrees, the Integrated Waste Division will determine by measurement or calculations which of the residences do not provide the necessary noise attenuation to meet the 45 dBA Ldn standard with the windows closed.

For those residences that do not provide the necessary attenuation, the Integrated Waste Division will pay the cost and arrange for the installation of improvements to achieve the necessary sound attenuation. If the owner prefers to install the improvements or select other parties to install the improvements, the Integrated Waste Division will pay the estimated cost of the improvements to the owner. Improvements may include replacing existing windows that face Mecham Road with laminated glass or other acoustically rated window systems and weatherstripping doors that face Mecham Road to eliminate acoustical leaks. If necessary to provide fresh air and cooling to maintain a habitable environment in rooms that require closed windows, a mechanical ventilation/cooling system conforming to the requirements of the Uniform Building and Mechanical Codes may be installed.

Time of Implementation: Within one year of awarding the construction contract for the landfill expansion.

Responsibility: The Project Manager will confirm that the measure has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 3b. The Integrated Waste Division will offer to construct a six-foot high solid wood fence along the front property line of the properties identified below. If accepted by the property owner, the Integrated Waste Division will construct the fence, or pay the cost of construction by others.

Assessor's Parcel Numbers	Site Address
24-070-16	2710 Stony Point Road
24-070-22	2886 Stony Point Road
24-070-24	2780 Stony Point Road
24-070-7	2741 Stony Point Road
24-070-12	2743 Stony Point Road
24-070-14	2745 Stony Point Road
24-050-12	2888 Stony Point Road
24-050-11	7375 Stony Point Road
46-101-19	1648 West Sierra Ave

Time of Implementation: Within one year of awarding the construction contract for the landfill expansion.

Responsibility: The Project Manager will confirm that the measure has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biological Resources Mitigation Measure No. 1. The Integrated Waste Division shall create new wetlands and enhance existing wetlands to compensate for the loss of wetlands that will result from the project. The goal of the mitigation shall be no net loss of wetland function or habitat value. To meet this goal, new wetlands will be created and existing wetlands associated with hillside seeps and springs that are presently in a degraded condition will be enhanced. Enhancements will include minor grading to expand the wetland area, fencing to control cattle grazing, and planting native willows. A potential location for this mitigation is the 38-acre parcel that is owned by the County and located on Hammel Road immediately south of the landfill.

The proposed wetland mitigation plan will be reviewed by a qualified biologist and will be submitted to the California Department of Fish and Game for review and comment prior to implementation. Plant material used for this mitigation measure shall be native species propagated from seeds or cuttings obtained within a 10 mile radius of the site.

The mitigation wetlands will be on public land or on private land on which an easement been obtained for this purpose. The wetlands will be managed in such a way as to permanently protect the wetland habitat value. This measure will be implemented during the first year following Board of Supervisors approval of a construction contract for any project component that would fill wetlands.

Time of Implementation: Construction, during the first year following approval by the Board of Supervisors of a construction contract that would result in filling wetlands.

Responsibility: The Project Manager will confirm that the wetland creation/enhancement project has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biological Resources Mitigation Measure No. 2. The Integrated Waste Division shall compensate for the loss of riparian scrub vegetation by planting at least 0.5 acre along a similar intermittent creek that presently lacks native riparian vegetation. The intermittent creek that bisects the County-owned property on the south side of Hammel Road, or a similar creek in the general vicinity would be acceptable for this mitigation measure.

The proposed planting plan will be reviewed by a qualified biologist and will be submitted to the California Department of Fish and Game for review and comment prior to planting. Plant material used for this mitigation measure shall be native riparian species propagated from seeds or cuttings obtained within a 10 mile radius of the site.

The revegetated area will be on public land or on private land on which an easement been obtained for this purpose. The revegetated area will be managed in such a way as to permanently protect the riparian vegetation. This measure will be implemented during the first year following Board of Supervisors approval of a construction contract for any project component that would remove riparian scrub vegetation.

This measure applies only to the East Canyon landfill expansion.

Time of Implementation: Construction, during the first year following approval by the Board of Supervisors of the construction contract for the East Canyon expansion.

Responsibility: The Project Manager will confirm that the measure has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biological Resources Mitigation Measure No. 3. The Integrated Waste Division shall create an area of new pond habitat for the California red-legged frog similar to that provided by the existing sediment pond located near the Central Disposal Site administration building. The new habitat may be created by building one or more new ponds on-site or off-site near the vicinity of the Central Disposal Site. Habitat restoration plans will be submitted to the California Department of Fish and Game for review and approval prior to construction of the habitat. The new habitat will be created at least one year prior to disturbing the existing habitat. A management plan will be prepared and implemented to ensure long term protection of the habitat.

This measure applies only to the East Canyon landfill expansion.

Time of Implementation: Construction, at least one year prior to filling the existing pond.

Responsibility: The Project Manager will confirm that plans have been submitted to the California Department of Fish and Game for review, and that the new pond habitat has been constructed prior to filling the existing sediment pond.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biological Resources Mitigation Measure No. 4. Prior to filling the East Canyon sediment pond immediately south of the administration building, the pond will be examined by a qualified biologist to determine whether red-legged frog egg masses, larvae, juveniles, or adults are present. If egg masses or larvae are present, the pond will not be disturbed until late summer or early fall to avoid their destruction. If juvenile or adult frogs are present, they will be trapped and released in the new habitat that has been created to mitigate the loss of the sediment pond, or in other suitable habitat. The California Department of Fish and Game will be consulted prior to trapping for approval of the trapping methods and the location for release.

This measure applies only to the East Canyon landfill expansion.

Time of Implementation: Construction, prior to filling the existing pond.

Responsibility: The Project Manager will confirm that the measure has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biological Resources Mitigation Measure No. 5. Before construction in the East or West Canyon landfill expansion areas the Integrated Waste Division shall determine the locations of any active raptor nests. If any active nests are found, removal of the trees containing the nests shall be delayed until a qualified wildlife biologist has determined that the young birds are able to leave the nest and forage on their own. A qualified wildlife biologist shall be consulted to determine what activities must be avoided in the vicinity of the nests while the nests are active, and those recommendations shall be followed during construction.

Time of Implementation: Preconstruction and Construction

Responsibility: The Project Manager will confirm that the trees were inspected prior to construction,

and that the recommendations were followed.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Land Use Mitigation Measures 1a and 1b. Not applicable to this component

Visual Resources Mitigation Measure No. 1. The Integrated Waste Division will plant trees on the Central Disposal Site parcel near the Mecham Road/Hammel Road intersection. The species selected will be trees that are relatively fast growing, and irrigation will be provided to promote rapid growth. The trees will be planted within six months of Board of Supervisors approval of the East Canyon landfill expansion.

Time of Implementation: Operations.

Responsibility: The Site Operations Manager will confirm that this measure has been implemented.

Record of Compliance:

Site Operations Manager_____ Date _____

Comments:

Visual Resources Mitigation Measure No. 2. The Integrated Waste Division will continue the existing litter control program, and expand it to include landfill operations in the East and West Canyons. Litter fences will be constructed at the periphery of the landfill areas as needed to catch litter blowing from the landfill. The existing litter clean-up program will be continued while the landfill is in operation.

The Integrated Waste Division will increase the frequency of litter pick up along Mecham Road and Stony Point Road from West Railroad Avenue to Hwy 116 so that these roadsides will be cleaned each day that the landfill is open. The Division will also post signs on Mecham Road that will give a phone number at the Central Disposal Site that people may call to report vehicles that are seen littering on the way to or from the Central Disposal Site. At least one sign for the northbound direction near Pepper Road and one for the southbound direction near Stony Point Road will be posted.

Time of Implementation: Operations, during the life of the project..

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operational procedures.

Record of Compliance:

Site Operations Manager_____ Date _____

Comments:

Visual Resources Mitigation Measure 3: Not applicable to this component.

Cultural Resources Mitigation Measure No. 1. An archaeologist will monitor the construction sites of all components except the soil bioremediation facility during the initial site grading. An inspection will be made following removal of vegetation, but prior to deep grading (grading beneath the topsoil). If an archaeological resource is found, grading in the vicinity of the find will cease until an archaeologist has inspected the materials and made recommendations. If human bone is uncovered, all work in the vicinity will halt, and the County Coroner will be notified.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract special provisions include language that will require the contractor to stop grading in the vicinity of any archaeological resources identified by the archaeological monitor. The Project Manager will confirm that the monitoring was performed and that the requirements of this measure were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 2. A paleontological monitor will be present during the first excavations in the East and West Canyon landfill expansion areas. An inspection will be made after overlying soils have been removed and bedrock is exposed. If resources are found, excavation in the immediate vicinity will cease long enough to allow recovery of the resources. Materials that are recovered will be curated at the nearest designated scientific repository. Based on the results of the inspection, the paleontologist will develop a monitoring plan for the remainder of the excavations in each canyon, and the monitoring will be incorporated into the grading and construction schedules.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract special provisions include language that will require the contractor to stop grading in the vicinity of any paleontological resources identified by the monitor. The Project Manager will confirm that the monitoring was performed and that the requirements of this measure were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

HOUSEHOLD HAZARDOUS WASTE FACILITY
RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the plans and specifications with the Project Manager prior to the construction contract being awarded to assure that the responsibility for completion of the mitigation measures has been assigned and that the plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ Date _____

Comments:

Geology Mitigation Measures Nos. 1-3: Not applicable to this component

Geology Mitigation Measure No. 4. The Storm Water Pollution Prevention Plan will be revised to address all facilities existing and proposed for the Central Disposal Site. The plan will be submitted to the Regional Water Quality Control Board, and at the minimum will include:

A. A description of the critical features of the erosion control system, including the sediment ponds, and drainage ways, along with a description and schedule for routine maintenance of these features.
B. A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to constructing the East or West Canyon landfill expansions, and prior to constructing the household hazardous waste facility or other facilities proposed for the upper part of the East Canyon drainage.
C. A requirement to vegetate side slopes and waste-fill slopes. Temporary and permanent vegetative cover will be established as soon as possible on side slopes and waste-fill slopes. To protect the slopes prior to vegetation establishment, a mulch, consisting of straw or wood fiber will be applied at the time of seeding. a tackifier shall be applied with the mulch as needed to prevent loss of the mulch due to wind or water movement. Sample specifications for revegetating disturbed areas shall be included, including a description of the types of areas to be revegetated, the equipment and procedures to be used, and the time of year the seeding is to be done. For areas where an erosion potential exists but it is not practical to establish vegetation, specifications for placing mulch or temporary covers shall be included.
D. Specifications for construction features to reduce erosion. These shall include benches on slopes to intercept sheet flow and shorten drainage paths, protective linings (e.g. riprap, concrete, grass, erosion control mats) on interim and final drainage ways, and energy dissipators at inlets and outlets of sediment ponds and at outlets of culverts."
E. Best Management Practices for construction and operation of the various facilities and the landfill expansion areas. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property.
F. Specifications for watering roads, borrow areas, and construction areas to control wind erosion.
G. An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.
H. A schedule for winterizing the site that will ensure that critical work is done prior to October 15 each year.

Time of Implementation: Plan Check, Pre-construction, Construction, and Operations

Responsibility: The Project Manager will confirm that the Stormwater Pollution Prevention Plan has been revised and submitted to Regional Water Quality Control Board before construction of the facility. The Project Manager will confirm that contract specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the measures in the plan were implemented during construction. The Operations Manager will confirm that the plan has been incorporated into the facility's operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 5: Not applicable to this component

Water Resources Mitigation Measures 1a, 1b, 1c, and 2: Not applicable to this component

Water Resources Mitigation Measure No. 3. Prior to construction, a spill prevention plan will be prepared for each project component. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. This plan will be part of the Storm Water Pollution Plan required by Geology Mitigation Measure 4.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the plan was prepared and that the project specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the plan was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measures Nos. 4, 5, and 6a through 6f: Not applicable to this component

Air Quality Mitigation Measure No. 1. The Integrated Waste Division will prepare and implement a plan to reduce dust emissions from construction and operation of the facilities at the Central Disposal Site. The plan will be in place prior to beginning construction of any of the facilities. At a minimum, the plan will contain the following features:

A. Construction areas will be watered as needed to control dust.
B. Water or other dust suppressants will be used on unpaved haul roads.
C. Watering will be done more frequently when wind speeds exceed 15 mph.
D. Dirt stockpiles will be watered or otherwise protected with a dust suppressant.
E. Vehicle speeds will be limited to 15 mph on unpaved haul roads.
F. Integrated Waste staff will monitor the condition of the main access road to the site, including its intersection with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.
G. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.
H. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.
I. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.
J. The rock crusher shall be equipped with a spray mister, or incorporate some other equally effective measure to control dust.

Time of Implementation: Plan Check, Construction, and Operation

Responsibility: The Project Manager will confirm that the project specifications include language requiring contractor compliance with the dust control measures, and that the measures were implemented during construction. The Operations Manager will confirm that the dust control measures have been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2a. Contracts for construction and operation of the landfill expansion and other facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the contract specifications contain language requiring the contractor to comply with this measure, and that the measure was implemented during construction. The Site Operations Manager will confirm that the measure has been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2b. Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment. When the landfill gas fuel facility has been constructed, subsequent contracts for operations of the facilities will also include incentives for converting internal combustion engines to use natural gas fuel.

Time of Implementation: Plan Check and Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for preparing contracts for facility operations.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measures 2c, 3a, 3b, 4a, 4b, 5, and 6: Not applicable to this component

Public Health and Safety Mitigation Measure 1a: Not applicable to this component.

Public Health and Safety Mitigation Measure No. 1b. The operation plan for the household hazardous waste facility shall include a procedure to be used when sensitive materials that are not normally handled by such facilities, such as explosives, are brought to the facility. The facility will include an isolation container, where such materials may be safely contained until the proper emergency response agency arrives on site to take charge of the materials.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the HHW plans and specifications incorporate the features required by this measure. The Site Operations Manager will confirm that the measure has been incorporated into the operating procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigations 2 and 3: Not applicable to this component

Public Health and Safety Mitigation Measure No. 4. Prior to construction of any new building on the Central Disposal Site, plans shall be reviewed for compliance with applicable fire codes by the Sonoma County Permit and Resource Management Department Building Inspection Division and the Rancho Adobe Fire District.

The Integrated Waste Division will consult with the Rancho Adobe Fire District and will revise the existing fire prevention plan to include the proposed new or expanded facilities. Upon approval of the fire prevention measures by the Rancho Adobe Fire District, the fire prevention plan will be included in the Joint Technical Document. At a minimum the plan will include descriptions of the following:

1. Amount of water storage available for fire fighting.
2. Numbers, locations, and description of all fire hydrants and fire fighting equipment on the site.
3. Procedures for fighting a fire on site, including operation of fire extinguishers, hoses, retardants, and use of water trucks and heavy equipment to extinguish garbage fires.
4. Responses to fire incidents, including procedures for denying entry, evacuating the site, notifying emergency responders, and notifying nearby residents.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the building plans have been reviewed for compliance with applicable fire codes by PRMD and the Rancho Adobe Fire District. The Project Manager will confirm that the project was constructed to conform the applicable fire codes. The Site Operations Manager will confirm that the fire prevention plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 5a, 5b, and 5c: Not applicable to this component

Public Health and Safety Mitigation Measure No. 6a. The Integrated Waste Division will consult with the Sonoma County Department of Emergency Services and will revise the existing emergency response and evacuation plan to include responses to potential emergencies involving the household hazardous waste, gas fuel facility, and the blasting and rock processing related to construction of the East and West Canyon landfill expansions. This plan must be approved by the Department of Emergency Services prior to use of the new facilities or implementation of blasting or rock processing operations. Upon approval of the plan, it will be incorporated into the Joint Technical Document for the Central Disposal Site. Items to be described in the plan are described below.

Landfill construction. The Integrated Waste Division will develop a plan or modify the existing plan to detail emergency response procedures for potential accidents related to construction activities in the proposed East and West Canyon landfill expansion. At the minimum, the plan will address potential responses to blasting-related accidents, including those that could occur after daily closure of the landfill, and accidents related to special equipment or operations, such as the rock drilling or rock processing.

Household Hazardous Waste Facility. In accordance with State and Federal laws, the Integrated Waste Division will develop an operation plan, worker health and safety plan, and an emergency response plan. The operation plan will detail handling procedures for hazardous wastes, procedures for handling sensitive materials such as explosives, preventative and safety measures, daily and periodic safety inspections for safety equipment, reporting and tracking methods, and personnel training requirements. The worker health and safety plan will also encompass training requirements, safety equipment and inspections, signs and warning systems. The emergency response plan will detail responses to potential spills, releases, receipt of sensitive materials, fires, and explosions. This will include the appropriate agencies to notify, procedures for emergency isolation and management of the site, identification of the waste involved, notification of the surrounding community (if needed), evacuation of the site (and surrounding community, if needed), and the appropriate hazardous materials clean-up activity.

Landfill Gas Fuel Facility. The Integrated Waste Division will develop a plan that will detail emergency shut-down procedures, worker training, inspections, maintenance of safety devices, notification procedures, and site evacuation procedures. This plan will be prepared after consultation with the Rancho Adobe Fire District.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the emergency response plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure 6b. The Integrated Waste Division will expand the existing emergency response training program that the landfill workers now undergo each year. The expanded program will include on-site mock incidence training sessions once a year. In addition to the landfill workers, the Rancho Adobe Fire District and other emergency responders will be invited to participate in these training sessions. The goal of the training sessions will be to familiarize workers and emergency services with emergency situations that may be unusual because of the types of facilities that will be operated at the site.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6c. The Integrated Waste Division will assist in improving the effectiveness of the County's Community Alert Network in the vicinity of the landfill. This will be done by identifying addresses within a one-mile radius of the Central Disposal Site that may not be in the Community Alert Network, and sending a mailer to those addresses. The mailer will include a form that the resident can fill out and return to the County if they wish to have their phone number added to the Community Alert Network.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been implemented prior to operation of any of the new or expanded facilities.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 7a and 7b: Not applicable to this component.

Traffic Mitigation Measure No. 1a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Mecham intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the construction contracts include language allowing the County to restrict construction traffic during the morning peak hour. The Site Operations Manager will confirm that subsequent contracts with operators also include this language, and that the operational procedures incorporate this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 1b. Prior to construction of the project, the Integrated Waste Division will pay a traffic mitigation feet that will include a fair share cost of installing a traffic signal at the Stony Point/Mecham intersection. At the minimum, the Integrated Waste Division's share will be equal to the ratio of Central Disposal Site traffic on Mecham Road to total traffic on Mecham Road, using projected 2005 volumes from this EIR. The share may be increased if the Road Division of the Department of Transportation and Public Works determines that a greater share is appropriate because of the large amount of truck traffic associated with the Central Disposal Site.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants.

To ensure that funds will be available to install the signal when it is needed, the Integrated Waste Division will provide up to 100% of the cost of design and construction of the signal. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the fair share costs as funds become available.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 2a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Roblar intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the contract specifications prohibit new truck traffic through the intersection, and that the measure was implemented during construction.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 2b. Prior to construction of the project, the Integrated Waste Division will pay a traffic mitigation fee that will include a fair share contribution toward the installation of a signal at the Stony Point/Roblar intersection. The amount will be determined by the Department of Transportation and Public Works Road Division, using the same methodology that is applied to private projects that have off-site traffic impacts.

The Road Division of the Department of Transportation and Public Works will monitor traffic at this intersection, and will cause a traffic signal to be installed when the Division has determined that the intersection meets the necessary warrants. Funding for signal construction would come from established funding sources for county road improvements such as traffic mitigation fees or other road improvement funds, as appropriate.

If the County-wide traffic mitigation fund is insufficient to install the signal at the Stony Point/Roblar intersection by the time that the Road Division determines that a signal is necessary, the Integrated Waste Division will provide up to 100 percent of the cost of design and construction of the signal. The County-wide traffic mitigation fund will reimburse the Integrated Waste Division for payments made in excess of the Central Disposal Site's fair share as funds become available.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigations 3a and 3b. Not applicable to this component

Traffic Mitigation Measure No. 4. The Department of Transportation and Public Works will compensate for the limited sight distance at the Highway 101 offramp/West Railroad Avenue intersection by installing an all-way stop at the intersection or posting advisory speed signs or other warning signs on the West Railroad Avenue intersection approaches. This measure shall be implemented prior to construction of the landfill expansion, household hazardous waste facility, or soil bioremediation facility.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the improvemets have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5a. The Department of Transportation and Public Works will compensate for the limited sight distance at the Mecham/Wambold intersection by installing a 35 mph advisory speed sign for northbound Mecham Road between the landfill access road and Wambold Lane. This measure shall be implemented prior to construction of any project component other than the operational improvements. The Integrated Waste Division will pay the cost of this installation.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5b. The Integrated Waste Division will institute a mandatory driver education program for the commercial refuse haulers and any other commercial haulers who regularly pick up or deliver materials to the Central Disposal Site and are subject to control by the County. The program will familiarize the drivers with the speed limits on Mecham Road, areas having borderline sight distance, and the locations of school bus stops. The program will be implemented prior to operation of any project component other than the operational improvements.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the driver's education program has been implemented.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 6. Not applicable to this component.

Traffic Mitigation Measure No. 7. The Department of Transportation and Public Works will either: (1) construct vehicle turn-around areas at the driveways to 301, 303, 305, and 319 Mecham Road; or (2) widen the shoulder of Mecham Road near these driveways to provide more room for residents to turn their cars around before entering the traffic lane. The Integrated Waste Division will pay the cost of these improvements. This measure will be implemented prior to construction of any project component other than the operational improvements.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division and that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigations 1a, 1b, and 1c. Not applicable to this component.

Noise Mitigation Measure No. 2a. Construction activities at the sites for the household hazardous waste facility, gas fuel facility, public dumping area, and recycle/reuse facility will be restricted to the hours between 7 AM and 5 PM on weekdays, and 9 AM to 5 PM on weekends or holidays.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications require the contractor to comply with the hours of operation, and that this measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2b. The Integrated Waste Division will require that all construction vehicles and equipment be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2c. Construction equipment or materials storage areas shall be located as far away as practicable from residences.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure 2d. The Integrated Waste Division will include noise as an evaluation criterion during facility design and when purchasing new equipment and vehicles for use at the Central Disposal Site.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigation Measures 3a and 3b. Not applicable to this component

Biotic Mitigation Measures 1, 2, 3, 4 and 5. Not applicable to this component

Land Use Mitigation Measure No. 1a. If the Integrated Waste Division acquires land from the dairy to the north (APN 24-080-18), that portion along the north and east perimeter of the land that is not needed for facilities and associated improvements or landscaping will be retained permanently in agricultural use. This will be done by placing an easement or other deed restriction that identifies that portion of the land that may only be used for agricultural purposes. Permissible agricultural uses are grazing and cultivation of crops.

Time of Implementation: Pre-Construction, Operations

Responsibility: The Site Operations Manager will confirm that the necessary land dedication or easement is made when the property is acquired, and will confirm that the operational procedures are consistent with continued agricultural use of that portion of the land.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Land Use Mitigation Measure No. 1b. If the Integrated Waste Division acquires land from the dairy to the north (APN 24-080-18), a portion of the landfill parcel (APN 24-080-19) along the eastern boundary that is not needed for Central Disposal Site improvements or landscaping will be designated for permanent agricultural use. This will be done by placing an easement or other deed restriction that identifies that portion of the land that may only be used for agricultural purposes. The portion designated for agricultural use will be fenced. Permissible agricultural uses are grazing and cultivation of crops. The area of the landfill parcel designated for agricultural use when added to the area retained in agricultural use by Land Use Mitigation Measure No. 1a will be at least as large as the area of land acquired from parcel 24-080-18.

Time of Implementation: Pre-Construction, Operations

Responsibility: The Site Operations Manager will confirm that the necessary land dedication or easement is placed on a portion of the landfill parcel when the additional property is acquired, and will confirm that the agricultural portion of the landfill parcel is fenced and that the operational procedures are consistent with permanent agricultural use of that portion of the parcel.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Visual Resources Mitigation Measure Nos. 1 and 2. Not applicable to this component.

Visual Resources Mitigation Measure No. 3. The Integrated Waste Division will prepare and implement a landscape and screening plan for new structures associated with any of the project components that could be visible from off-site. The plan will include the following features:

1. Retain existing screening trees where practical.

2. Plant new screening trees where they will be effective in blocking off site views of new structures. At a minimum, include a continuous row of trees along the east and north sides of the household hazardous waste and public dumping area. Select and plant species to replicate the pattern of windbreak plantings common in the area, which include Eucalyptus, but will also include native trees such as live oak. Provide irrigation to promote rapid growth.

3. Select earth tone colors (beige, tan, pale green) for new buildings that may be visible from off site.

4. Use low profile, unobtrusive lighting for outdoor lights that could be visible from off site. Where practical, use lights that are normally off, but are switched on by motion sensors so that lights are only used when needed.

5. Plant the landscaping when the public tipping area or the household hazardous waste facility (whichever occurs first) is constructed.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the construction plans and contract specifications include language requiring the protection of screening trees that are to be left in place, that earth tones have been specified for buildings that may be visible from off site, and that building and area lighting has been designed in conformance with this measure. The Project Manager will confirm that the measures were implemented during construction. The Site Operations Manager will confirm that new screening trees have been planted in conformance with this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 1. An archaeologist will monitor the construction sites of all components except the soil bioremediation facility during the initial site grading. An inspection will be made following removal of vegetation, but prior to deep grading (grading beneath the topsoil). If an archaeological resource is found, grading in the vicinity of the find will cease until an archaeologist has inspected the materials and made recommendations. If human bone is uncovered, all work in the vicinity will halt, and the County Coroner will be notified.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract special provisions include language that will require the contractor to stop grading in the vicinity of any archaeological resources identified by the archaeological monitor. The Project Manager will confirm that the monitoring was performed and that the requirements of this measure were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 2. Not applicable to this component

GAS FUEL FACILITY
RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the plans and specifications with the Project Manager prior to the construction contract being awarded to assure that the responsibility for completion of the mitigation measures has been assigned and that the plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ Date _____

Comments:

Geology Mitigation Measures Nos. 1-3: Not applicable to this component

Geology Mitigation Measure No. 4. The Storm Water Pollution Prevention Plan will be revised to address all facilities existing and proposed for the Central Disposal Site. The plan will be submitted to the Regional Water Quality Control Board, and at the minimum will include:

A. A description of the critical features of the erosion control system, including the sediment ponds, and drainage ways, along with a description and schedule for routine maintenance of these features.

B. A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to constructing the East or West Canyon landfill expansions, and prior to constructing the household hazardous waste facility or other facilities proposed for the upper part of the East Canyon drainage.

C. A requirement to vegetate side slopes and waste-fill slopes. Temporary and permanent vegetative cover will be established as soon as possible on side slopes and waste-fill slopes. To protect the slopes prior to vegetation establishment, a mulch, consisting of straw or wood fiber will be applied at the time of seeding. a tackifier shall be applied with the mulch as needed to prevent loss of the mulch due to wind or water movement. Sample specifications for revegetating disturbed areas shall be included, including a description of the types of areas to be revegetated, the equipment and procedures to be used, and the time of year the seeding is to be done. For areas where an erosion potential exists but it is not practical to establish vegetation, specifications for placing mulch or temporary covers shall be included.

D. Specifications for construction features to reduce erosion. These shall include benches on slopes to intercept sheet flow and shorten drainage paths, protective linings (e.g. riprap, concrete, grass, erosion control mats) on interim and final drainage ways, and energy dissipators at inlets and outlets of sediment ponds and at outlets of culverts."

E. Best Management Practices for construction and operation of the various facilities and the landfill expansion areas. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property.

F. Specifications for watering roads, borrow areas, and construction areas to control wind erosion.

G. An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.

H. A schedule for winterizing the site that will ensure that critical work is done prior to October 15 each year.

Time of Implementation: Plan Check, Pre-construction, Construction, and Operations

Responsibility: The Project Manager will confirm that the Stormwater Pollution Prevention Plan has been revised and submitted to Regional Water Quality Control Board before construction of the facility. The Project Manager will confirm that contract specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the measures in the plan were implemented during construction. The Operations Manager will confirm that the plan has been incorporated into the facility's operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 5: Not applicable to this component

Water Resources Mitigation Measures 1a, 1b, 1c, and 2: Not applicable to this component

Water Resources Mitigation Measure No. 3. Prior to construction, a spill prevention plan will be prepared for each project component. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. This plan will be part of the Storm Water Pollution Plan required by Geology Mitigation Measure 4.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the plan was prepared and that the project specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the plan was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measures Nos. 4, 5, and 6a through 6f. Not applicable to this component

Air Quality Mitigation Measure No. 1. The Integrated Waste Division will prepare and implement a plan to reduce dust emissions from construction and operation of the facilities at the Central Disposal Site. The plan will be in place prior to beginning construction of any of the facilities. At a minimum, the plan will contain the following features:

A. Construction areas will be watered as needed to control dust.
B. Water or other dust suppressants will be used on unpaved haul roads.
C. Watering will be done more frequently when wind speeds exceed 15 mph.
D. Dirt stockpiles will be watered or otherwise protected with a dust suppressant.
E. Vehicle speeds will be limited to 15 mph on unpaved haul roads.
F. Integrated Waste staff will monitor the condition of the main access road to the site, including its intersection with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.
G. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.
H. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.
I. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.
J. The rock crusher shall be equipped with a spray mister, or incorporate some other equally effective measure to control dust.

Time of Implementation: Plan Check, Construction, and Operation

Responsibility: The Project Manager will confirm that the project specifications include language requiring contractor compliance with the dust control measures, and that the measures were implemented during construction. The Operations Manager will confirm that the dust control measures have been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2a. Contracts for construction and operation of the landfill expansion and other facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the contract specifications contain language requiring the contractor to comply with this measure, and that the measure was implemented during construction. The Site Operations Manager will confirm that the measure has been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2b. Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment. When the landfill gas fuel facility has been constructed, subsequent contracts for operations of the facilities will also include incentives for converting internal combustion engines to use natural gas fuel.

Time of Implementation: Plan Check and Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for preparing contracts for facility operations.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measures 2c, 3a, 3b, 4a, 4b, 5, and 6. Not applicable to this component

Public Health and Safety Mitigation Measures No. 1a and 1b. Not applicable to this component

Public Health and Safety Mitigation Measure No. 2. To reduce the possibility that vehicles could collide with gas fuel facility equipment, the final design of the facility shall include features such as guard rails, earth berms, barriers, or bollards to protect the facility from accidental damage.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the safety features have been included in the plans and specifications for the project, and that the features were installed during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 3. The operation of the gas fuel facility will include the following safety measures: (1) users of the facility will receive training on the precautions to be taken while refueling at the facility; (2) fire fighting equipment will be provided at the Central Disposal Site, and employees trained in manual operation of the fuel facility emergency shutdown system; and (3) preventative maintenance on the facility equipment and periodic inspections of the facility will be made to ensure proper operation of all equipment.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measures have been incorporated into the operational procedures for the facility.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 4. Prior to construction of any new building on the Central Disposal Site, plans shall be reviewed for compliance with applicable fire codes by the Sonoma County Permit and Resource Management Department Building Inspection Division and the Rancho Adobe Fire District.

The Integrated Waste Division will consult with the Rancho Adobe Fire District and will revise the existing fire prevention plan to include the proposed new or expanded facilities. Upon approval of the fire prevention measures by the Rancho Adobe Fire District, the fire prevention plan will be included in the Joint Technical Document. At a minimum the plan will include descriptions of the following:

1. Amount of water storage available for fire fighting.
2. Numbers, locations, and description of all fire hydrants and fire fighting equipment on the site.
3. Procedures for fighting a fire on site, including operation of fire extinguishers, hoses, retardants, and use of water trucks and heavy equipment to extinguish garbage fires.
4. Responses to fire incidents, including procedures for denying entry, evacuating the site, notifying emergency responders, and notifying nearby residents.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the building plans have been reviewed for compliance with applicable fire codes by PRMD and the Rancho Adobe Fire District. The Project Manager will confirm that the project was constructed to conform the applicable fire codes. The Site Operations Manager will confirm that the fire prevention plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigations 5a, 5b, and 5c. Not applicable to this component

Public Health and Safety Mitigation Measure No. 6a. The Integrated Waste Division will consult with the Sonoma County Department of Emergency Services and will revise the existing emergency response and evacuation plan to include responses to potential emergencies involving the household hazardous waste, gas fuel facility, and the blasting and rock processing related to construction of the East and West Canyon landfill expansions. This plan must be approved by the Department of Emergency Services prior to use of the new facilities or implementation of blasting or rock processing operations. Upon approval of the plan, it will be incorporated into the Joint Technical Document for the Central Disposal Site. Items to be described in the plan are described below.

Landfill construction. The Integrated Waste Division will develop a plan or modify the existing plan to detail emergency response procedures for potential accidents related to construction activities in the proposed East and West Canyon landfill expansion. At the minimum, the plan will address potential responses to blasting-related accidents, including those that could occur after daily closure of the landfill, and accidents related to special equipment or operations, such as the rock drilling or rock processing.

Household Hazardous Waste Facility. In accordance with State and Federal laws, the Integrated Waste Division will develop an operation plan, worker health and safety plan, and an emergency response plan. The operation plan will detail handling procedures for hazardous wastes, procedures for handling sensitive materials such as explosives, preventative and safety measures, daily and periodic safety inspections for safety equipment, reporting and tracking methods, and personnel training requirements. The worker health and safety plan will also encompass training requirements, safety equipment and inspections, signs and warning systems. The emergency response plan will detail responses to potential spills, releases, receipt of sensitive materials, fires, and explosions. This will include the appropriate agencies to notify, procedures for emergency isolation and management of the site, identification of the waste involved, notification of the surrounding community (if needed), evacuation of the site (and surrounding community, if needed), and the appropriate hazardous materials clean-up activity.

Landfill Gas Fuel Facility. The Integrated Waste Division will develop a plan that will detail emergency shut-down procedures, worker training, inspections, maintenance of safety devices, notification procedures, and site evacuation procedures. This plan will be prepared after consultation with the Rancho Adobe Fire District.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the emergency response plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure 6b. The Integrated Waste Division will expand the existing emergency response training program that the landfill workers now undergo each year. The expanded program will include on-site mock incidence training sessions once a year. In addition to the landfill workers, the Rancho Adobe Fire District and other emergency responders will be invited to participate in these training sessions. The goal of the training sessions will be to familiarize workers and emergency services with emergency situations that may be unusual because of the types of facilities that will be operated at the site.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6c. The Integrated Waste Division will assist in improving the effectiveness of the County's Community Alert Network in the vicinity of the landfill. This will be done by identifying addresses within a one-mile radius of the Central Disposal Site that may not be in the Community Alert Network, and sending a mailer to those addresses. The mailer will include a form that the resident can fill out and return to the County if they wish to have their phone number added to the Community Alert Network.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been implemented prior to operation of any of the new or expanded facilities.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure 7a and 7b: Not applicable to this component.

Traffic Mitigation Measure No. 1a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Mecham intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the construction contracts include language allowing the County to restrict construction traffic during the morning peak hour. The Site Operations Manager will confirm that subsequent contracts with operators also include this language, and that the operational procedures incorporate this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigations 1b: Not applicable to this component

Traffic Mitigation Measure No. 2a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Roblar intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the contract specifications prohibit new truck traffic through the intersection, and that the measure was implemented during construction.
Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measures No. 2b, 3a, 3b, and 4: Not applicable to this component.

Traffic Mitigation Measure No. 5a. The Department of Transportation and Public Works will compensate for the limited sight distance at the Mecham/Wambold intersection by installing a 35 mph advisory speed sign for northbound Mecham Road between the landfill access road and Wambold Lane. This measure shall be implemented prior to construction of any project component other than the operational improvements. The Integrated Waste Division will pay the cost of this installation.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5b. The Integrated Waste Division will institute a mandatory driver education program for the commercial refuse haulers and any other commercial haulers who regularly pick up or deliver materials to the Central Disposal Site and are subject to control by the County. The program will familiarize the drivers with the speed limits on Mecham Road, areas having borderline sight distance, and the locations of school bus stops. The program will be implemented prior to operation of any project component other than the operational improvements.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the driver's education program has been implemented.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 7. The Department of Transportation and Public Works will either: (1) construct vehicle turn-around areas at the driveways to 301, 303, 305, and 319 Mecham Road; or (2) widen the shoulder of Mecham Road near these driveways to provide more room for residents to turn their cars around before entering the traffic lane. The Integrated Waste Division will pay the cost of these improvements. This measure will be implemented prior to construction of any project component other than the operational improvements.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division and that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measures No. 6 and 8: Not applicable to this component.

Noise Mitigations 1a, 1b, and 1c. Not applicable to this component.

Noise Mitigation Measure No. 2a. Construction activities at the sites for the household hazardous waste facility, gas fuel facility, public dumping area, and recycle/reuse facility will be restricted to the hours between 7 AM and 5 PM on weekdays, and 9 AM to 5 PM on weekends or holidays.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications require the contractor to comply with the hours of operation, and that this measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2b. The Integrated Waste Division will require that all construction vehicles and equipment be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2c. Construction equipment or materials storage areas shall be located as far away as practicable from residences.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure 2d. The Integrated Waste Division will include noise as an evaluation criterion during facility design and when purchasing new equipment and vehicles for use at the Central Disposal Site.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigations 3a and 3b. Not applicable to this component

Biotic Mitigation Measures 1, 2, 3, 4, and 5. Not applicable to this component

Land Use Mitigation Measures 1a and 1b. Not applicable to this component

Visual Resources Mitigation Measure Nos. 1 and 2. Not applicable to this component.

Visual Resources Mitigation Measure No. 3. The Integrated Waste Division will prepare and implement a landscape and screening plan for new structures associated with any of the project components that could be visible from off-site. The plan will include the following features:

1. Retain existing screening trees where practical.

2. Plant new screening trees where they will be effective in blocking off site views of new structures. At a minimum, include a continuous row of trees along the east and north sides of the household hazardous waste and public dumping area. Select and plant species to replicate the pattern of windbreak plantings common in the area, which include Eucalyptus, but will also include native trees such as live oak. Provide irrigation to promote rapid growth.

3. Select earth tone colors (beige, tan, pale green) for new buildings that may be visible from off site.

4. Use low profile, unobtrusive lighting for outdoor lights that could be visible from off site. Where practical, use lights that are normally off, but are switched on by motion sensors so that lights are only used when needed.

5. Plant the landscaping when the public tipping area or the household hazardous waste facility (whichever occurs first) is constructed.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the construction plans and contract specifications include language requiring the protection of screening trees that are to be left in place, that earth tones have been specified for buildings that may be visible from off site, and that building and area lighting has been designed in conformance with this measure. The Project Manager will confirm that the measures were implemented during construction. The Site Operations Manager will confirm that new screening trees have been planted in conformance with this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 1. An archaeologist will monitor the construction sites of all components except the soil bioremediation facility during the initial site grading. An inspection will be made following removal of vegetation, but prior to deep grading (grading beneath the topsoil). If an archaeological resource is found, grading in the vicinity of the find will cease until an archaeologist has inspected the materials and made recommendations. If human bone is uncovered, all work in the vicinity will halt, and the County Coroner will be notified.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract special provisions include language that will require the contractor to stop grading in the vicinity of any archaeological resources identified by the archaeological monitor. The Project Manager will confirm that the monitoring was performed and that the requirements of this measure were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 2. Not applicable to this component.

SOIL BIOREMEDIATION FACILITY
RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the plans and specifications with the Project Manager prior to the construction contract being awarded to assure that the responsibility for completion of the mitigation measures has been assigned and that the plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ Date _____

Comments:

Geology Mitigation Measures Nos. 1-3: Not applicable to this component

Geology Mitigation Measure No. 4. The Storm Water Pollution Prevention Plan will be revised to address all facilities existing and proposed for the Central Disposal Site. The plan will be submitted to the Regional Water Quality Control Board, and at the minimum will include:

A. A description of the critical features of the erosion control system, including the sediment ponds, and drainage ways, along with a description and schedule for routine maintenance of these features.

B. A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to constructing the East or West Canyon landfill expansions, and prior to constructing the household hazardous waste facility or other facilities proposed for the upper part of the East Canyon drainage.

C. A requirement to vegetate side slopes and waste-fill slopes. Temporary and permanent vegetative cover will be established as soon as possible on side slopes and waste-fill slopes. To protect the slopes prior to vegetation establishment, a mulch, consisting of straw or wood fiber will be applied at the time of seeding. a tackifier shall be applied with the mulch as needed to prevent loss of the mulch due to wind or water movement. Sample specifications for revegetating disturbed areas shall be included, including a description of the types of areas to be revegetated, the equipment and procedures to be used, and the time of year the seeding is to be done. For areas where an erosion potential exists but it is not practical to establish vegetation, specifications for placing mulch or temporary covers shall be included.

D. Specifications for construction features to reduce erosion. These shall include benches on slopes to intercept sheet flow and shorten drainage paths, protective linings (e.g. riprap, concrete, grass, erosion control mats) on interim and final drainage ways, and energy dissipators at inlets and outlets of sediment ponds and at outlets of culverts."

E. Best Management Practices for construction and operation of the various facilities and the landfill expansion areas. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property.

F. Specifications for watering roads, borrow areas, and construction areas to control wind erosion.

G. An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.

H. A schedule for winterizing the site that will ensure that critical work is done prior to October 15 each year.

Time of Implementation: Plan Check, Pre-construction, Construction, and Operations

Responsibility: The Project Manager will confirm that the Stormwater Pollution Prevention Plan has been revised and submitted to Regional Water Quality Control Board before construction of the facility. The Project Manager will confirm that contract specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the measures in the plan were implemented during construction. The Operations Manager will confirm that the plan has been incorporated into the facility's operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 5: Not applicable to this component

Water Resources Mitigation Measures 1a, 1b, 1c, and 2: Not applicable to this component

Water Resources Mitigation Measure No. 3. Prior to construction, a spill prevention plan will be prepared for each project component. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. This plan will be part of the Storm Water Pollution Plan required by Geology Mitigation Measure 4.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the plan was prepared and that the project specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the plan was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measures Nos. 4, 5, and 6a through 6f: Not applicable to this component.

Air Quality Mitigation Measure No. 1. The Integrated Waste Division will prepare and implement a plan to reduce dust emissions from construction and operation of the facilities at the Central Disposal Site. The plan will be in place prior to beginning construction of any of the facilities. At a minimum, the plan will contain the following features:

A. Construction areas will be watered as needed to control dust.
B. Water or other dust suppressants will be used on unpaved haul roads.
C. Watering will be done more frequently when wind speeds exceed 15 mph.
D. Dirt stockpiles will be watered or otherwise protected with a dust suppressant.
E. Vehicle speeds will be limited to 15 mph on unpaved haul roads.
F. Integrated Waste staff will monitor the condition of the main access road to the site, including its intersection with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.
G. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.
H. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.
I. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.
J. The rock crusher shall be equipped with a spray mister, or incorporate some other equally effective measure to control dust.

Time of Implementation: Plan Check, Construction, and Operation

Responsibility: The Project Manager will confirm that the project specifications include language requiring contractor compliance with the dust control measures, and that the measures were implemented during construction. The Operations Manager will confirm that the dust control measures have been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2a. Contracts for construction and operation of the landfill expansion and other facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the contract specifications contain language requiring the contractor to comply with this measure, and that the measure was implemented during construction. The Site Operations Manager will confirm that the measure has been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2b. Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment. When the landfill gas fuel facility has been constructed, subsequent contracts for operations of the facilities will also include incentives for converting internal combustion engines to use natural gas fuel.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for preparing contracts for facility operations.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measures 2c and 3a. Not applicable to this component

Air Quality Mitigation Measures 3b. The Integrated Waste Division will monitor soils brought to the landfill for bioremediation to ensure that the average contamination level for all the contaminated soil brought on-site in any calendar year does not exceed 700 parts per million total hydrocarbon petroleum contamination.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for operating the soil bioremediation facility.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measures 4a, 4b, and 5: Not applicable to this component

Air Quality Mitigation Measure No. 6. The operator of the soil bioremediation facility will not be permitted to use soil additives such as manure that have a strong odor. Only soil additives that do not have a strong odor, such as finished compost, will be used as additives.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for operating the soil bioremediation facility.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 1a, 1b, 2, and 3. Not applicable to this component

Public Health and Safety Mitigation Measure No. 4. Prior to construction of any new building on the Central Disposal Site, plans shall be reviewed for compliance with applicable fire codes by the Sonoma County Permit and Resource Management Department Building Inspection Division and the Rancho Adobe Fire District.

The Integrated Waste Division will consult with the Rancho Adobe Fire District and will revise the existing fire prevention plan to include the proposed new or expanded facilities. Upon approval of the fire prevention measures by the Rancho Adobe Fire District, the fire prevention plan will be included in the Joint Technical Document. At a minimum the plan will include descriptions of the following:

1. Amount of water storage available for fire fighting.
2. Numbers, locations, and description of all fire hydrants and fire fighting equipment on the site.
3. Procedures for fighting a fire on site, including operation of fire extinguishers, hoses, retardants, and use of water trucks and heavy equipment to extinguish garbage fires.
4. Responses to fire incidents, including procedures for denying entry, evacuating the site, notifying emergency responders, and notifying nearby residents.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the building plans have been reviewed for compliance with applicable fire codes by PRMD and the Rancho Adobe Fire District. The Project Manager will confirm that the project was constructed to conform the applicable fire codes. The Site Operations Manager will confirm that the fire prevention plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facility incorporate the applicable portions of the plan.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigations 5a, 5b, 5c, and 6a. Not applicable to this component

Public Health and Safety Mitigation Measure 6b. The Integrated Waste Division will expand the existing emergency response training program that the landfill workers now undergo each year. The expanded program will include on-site mock incidence training sessions once a year. In addition to the landfill workers, the Rancho Adobe Fire District and other emergency responders will be invited to participate in these training sessions. The goal of the training sessions will be to familiarize workers and emergency services with emergency situations that may be unusual because of the types of facilities that will be operated at the site.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6c. The Integrated Waste Division will assist in improving the effectiveness of the County's Community Alert Network in the vicinity of the landfill. This will be done by identifying addresses within a one-mile radius of the Central Disposal Site that may not be in the Community Alert Network, and sending a mailer to those addresses. The mailer will include a form that the resident can fill out and return to the County if they wish to have their phone number added to the Community Alert Network.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been implemented prior to operation of any of the new or expanded facilities.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 7a and 7b: Not applicable to this component.

Traffic Mitigation Measure No. 1a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Mecham intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the construction contracts include language allowing the County to restrict construction traffic during the morning peak hour. The Site Operations Manager will confirm that subsequent contracts with operators also include this language, and that the operational procedures incorporate this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation 1b. Not applicable to this component

Traffic Mitigation Measure No. 2a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Roblar intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the contract specifications prohibit new truck traffic through the intersection, and that the measure was implemented during construction.
Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measures 2b, 3a, and 3b: Not applicable to this component.

Traffic Mitigation Measure No. 4. The Department of Transportation and Public Works will compensate for the limited sight distance at the Highway 101 offramp/West Railroad Avenue intersection by installing an all-way stop at the intersection or posting advisory speed signs or other warning signs on the West Railroad Avenue intersection approaches. This measure shall be implemented prior to construction of the landfill expansion, household hazardous waste facility, or soil bioremediation facility.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the improvemets have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5a. The Department of Transportation and Public Works will compensate for the limited sight distance at the Mecham/Wambold intersection by installing a 35 mph advisory speed sign for northbound Mecham Road between the landfill access road and Wambold Lane. This measure shall be implemented prior to construction of any project component other than the operational improvements. The Integrated Waste Division will pay the cost of this installation.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 5b. The Integrated Waste Division will institute a mandatory driver education program for the commercial refuse haulers and any other commercial haulers who regularly pick up or deliver materials to the Central Disposal Site and are subject to control by the County. The program will familiarize the drivers with the speed limits on Mecham Road, areas having borderline sight distance, and the locations of school bus stops. The program will be implemented prior to operation of any project component other than the operational improvements.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the driver's education program has been implemented.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 6. Not applicable to this component.

Traffic Mitigation Measure No. 7. The Department of Transportation and Public Works will either: (1) construct vehicle turn-around areas at the driveways to 301, 303, 305, and 319 Mecham Road; or (2) widen the shoulder of Mecham Road near these driveways to provide more room for residents to turn their cars around before entering the traffic lane. The Integrated Waste Division will pay the cost of these improvements. This measure will be implemented prior to construction of any project component other than the operational improvements.

Time of Implementation: Pre-construction

Responsibility: The Site Operations Manager will confirm that the funds have been made available to the Road Division and that the improvements have been made.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigation Measures 1a, 1b, 1c, and 2a. Not applicable to this component.

Noise Mitigation Measure No. 2b. The Integrated Waste Division will require that all construction vehicles and equipment be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2c. Construction equipment or materials storage areas shall be located as far away as practicable from residences.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure 2d. The Integrated Waste Division will include noise as an evaluation criterion during facility design and when purchasing new equipment and vehicles for use at the Central Disposal Site.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Mitigation Measures 3a and 3b. Not applicable to this component.

Biotic Mitigation Measures 1, 2, 3, 4, and 5. Not applicable to this component.

Land Use Mitigation Measures 1a and 1b. Not applicable to this component.

Visual Mitigation Measures 1, 2, and 3. Not applicable to this component.

Cultural Mitigation Measures 1 and 2. Not applicable to this component.

OPERATIONAL IMPROVEMENTS
RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the plans and specifications with the Project Manager prior to the construction contract being awarded to assure that the responsibility for completion of the mitigation measures has been assigned and that the plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ Date _____

Comments:

Geology Mitigation Measures Nos. 1-3: Not applicable to this component

Geology Mitigation Measure No. 4. The Storm Water Pollution Prevention Plan will be revised to address all facilities existing and proposed for the Central Disposal Site. The plan will be submitted to the Regional Water Quality Control Board, and at the minimum will include:

A. A description of the critical features of the erosion control system, including the sediment ponds, and drainage ways, along with a description and schedule for routine maintenance of these features.
B. A construction schedule for the various components of the erosion control system. The critical components of the drainage ways and sediment ponds must be in place prior to constructing the East or West Canyon landfill expansions, and prior to constructing the household hazardous waste facility or other facilities proposed for the upper part of the East Canyon drainage.
C. A requirement to vegetate side slopes and waste-fill slopes. Temporary and permanent vegetative cover will be established as soon as possible on side slopes and waste-fill slopes. To protect the slopes prior to vegetation establishment, a mulch, consisting of straw or wood fiber will be applied at the time of seeding. a tackifier shall be applied with the mulch as needed to prevent loss of the mulch due to wind or water movement. Sample specifications for revegetating disturbed areas shall be included, including a description of the types of areas to be revegetated, the equipment and procedures to be used, and the time of year the seeding is to be done. For areas where an erosion potential exists but it is not practical to establish vegetation, specifications for placing mulch or temporary covers shall be included.
D. Specifications for construction features to reduce erosion. These shall include benches on slopes to intercept sheet flow and shorten drainage paths, protective linings (e.g. riprap, concrete, grass, erosion control mats) on interim and final drainage ways, and energy dissipators at inlets and outlets of sediment ponds and at outlets of culverts."
E. Best Management Practices for construction and operation of the various facilities and the landfill expansion areas. This includes miscellaneous grading and removal of cover soil from all parts of the Central Disposal Site property.
F. Specifications for watering roads, borrow areas, and construction areas to control wind erosion.
G. An inspection and/or maintenance schedule for critical parts of the sediment control system, including the sediment ponds and drainage ways.
H. A schedule for winterizing the site that will ensure that critical work is done prior to October 15 each year.

Time of Implementation: Plan Check, Pre-construction, Construction, and Operations

Responsibility: The Project Manager will confirm that the Stormwater Pollution Prevention Plan has been revised and submitted to Regional Water Quality Control Board before construction of the facility. The Project Manager will confirm that contract specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the measures in the plan were implemented during construction. The Operations Manager will confirm that the plan has been incorporated into the facility's operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Geology Mitigation Measure No. 5: Not applicable to this component

Water Resources Mitigation Measures 1a, 1b, 1c, and 2: Not applicable to this component

Water Resources Mitigation Measure No. 3. Prior to construction, a spill prevention plan will be prepared for each project component. The plan will identify procedures for refueling equipment, performing equipment maintenance and repair, and storing construction materials that will minimize the potential for spills. Refueling areas will be designated and restricted to locations where spills could be contained. The plan will include contingency measures to be used to contain and clean up spills and procedures for disposal of used or spilled materials. This plan will be part of the Storm Water Pollution Plan required by Geology Mitigation Measure 4.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the plan was prepared and that the project specifications include language requiring contractor compliance with the plan. The Project Manager will confirm that the plan was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Water Resources Mitigation Measures Nos. 4, 5, and 6a through 6f: Not applicable to this component

Air Quality Mitigation Measure No. 1. The Integrated Waste Division will prepare and implement a plan to reduce dust emissions from construction and operation of the facilities at the Central Disposal Site. The plan will be in place prior to beginning construction of any of the facilities. At a minimum, the plan will contain the following features:

A. Construction areas will be watered as needed to control dust.
B. Water or other dust suppressants will be used on unpaved haul roads.
C. Watering will be done more frequently when wind speeds exceed 15 mph.
D. Dirt stockpiles will be watered or otherwise protected with a dust suppressant.
E. Vehicle speeds will be limited to 15 mph on unpaved haul roads.
F. Integrated Waste staff will monitor the condition of the main access road to the site, including its intersection with Mecham Road. The pavement will be cleaned by washing or sweeping whenever it is apparent that sufficient soil has been tracked or spilled on the pavement to cause substantial dust.
G. To the extent possible, the contractor shall be required to remove all loose dirt and loose overburden material from the blasting area prior to drilling the blast holes.
H. As directed by the County engineer, the contractor shall spray water over blast areas prior to blasting.
I. The contractor shall be prohibited from loading explosives in blast holes and conducting a blast when the wind speed on the site exceeds 20 mph.
J. The rock crusher shall be equipped with a spray mister, or incorporate some other equally effective measure to control dust.

Time of Implementation: Plan Check, Construction, and Operation

Responsibility: The Project Manager will confirm that the project specifications include language requiring contractor compliance with the dust control measures, and that the measures were implemented during construction. The Operations Manager will confirm that the dust control measures have been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2a. Contracts for construction and operation of the landfill expansion and other facilities at the Central Disposal Site will require contractors to limit idling time of diesel equipment to 10 minutes when practical. Contracts will also require that equipment be serviced at regular intervals to keep engines operating within parameters that will prevent excessive emissions.

Time of Implementation: Plan Check, Construction, and Operations

Responsibility: The Project Manager will confirm that the contract specifications contain language requiring the contractor to comply with this measure, and that the measure was implemented during construction. The Site Operations Manager will confirm that the measure has been incorporated into the operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measure No. 2b. Contracts for operation of the various facilities at the Central Disposal Site will include incentives for using electric motors instead of internal combustion engines in stationary equipment. When the landfill gas fuel facility has been constructed, subsequent contracts for operations of the facilities will also include incentives for converting internal combustion engines to use natural gas fuel.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been incorporated into the procedures for preparing contracts for facility operations.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Air Quality Mitigation Measures 2c, 3a, 3b, 4, 5, and 6: Not applicable to this component

Public Health and Safety Mitigations 1a, 1b, 2, and 3. Not applicable to this component

Public Health and Safety Mitigation Measure No. 4. Prior to construction of any new building on the Central Disposal Site, plans shall be reviewed for compliance with applicable fire codes by the Sonoma County Permit and Resource Management Department Building Inspection Division and the Rancho Adobe Fire District.

The Integrated Waste Division will consult with the Rancho Adobe Fire District and will revise the existing fire prevention plan to include the proposed new or expanded facilities. Upon approval of the fire prevention measures by the Rancho Adobe Fire District, the fire prevention plan will be included in the Joint Technical Document. At a minimum the plan will include descriptions of the following:

1. Amount of water storage available for fire fighting.
2. Numbers, locations, and description of all fire hydrants and fire fighting equipment on the site.
3. Procedures for fighting a fire on site, including operation of fire extinguishers, hoses, retardants, and use of water trucks and heavy equipment to extinguish garbage fires.
4. Responses to fire incidents, including procedures for denying entry, evacuating the site, notifying emergency responders, and notifying nearby residents.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the building plans have been reviewed for compliance with applicable fire codes by PRMD and the Rancho Adobe Fire District. The Project Manager will confirm that the project was constructed to conform the applicable fire codes. The Site Operations Manager will confirm that the fire prevention plan has been prepared consistent with the requirements of this measure, that applicable portions of the plan have been included in the Joint Technical Document prior to operation of any new facility, and that the operational procedures for the facilities incorporate the applicable portions of the plan.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 5a. Not applicable to this component

Public Health and Safety Mitigation Measure No. 5b. Landscape materials used in the vicinity of the recycle/reuse facility shall exclude plants, such as ivy, that may provide favorable nesting areas for rodents. The site operator will place rodent traps around the recycling area as needed.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the plans and specifications for the facility conform to this measure. The Site Operations Manager will confirm that the measure has been incorporated into site operational procedures.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures No. 5c and 6a. Not applicable to this component.

Public Health and Safety Mitigation Measure 6b. The Integrated Waste Division will expand the existing emergency response training program that the landfill workers now undergo each year. The expanded program will include on-site mock incidence training sessions once a year. In addition to the landfill workers, the Rancho Adobe Fire District and other emergency responders will be invited to participate in these training sessions. The goal of the training sessions will be to familiarize workers and emergency services with emergency situations that may be unusual because of the types of facilities that will be operated at the site.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the operational procedures incorporate this measure.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measure No. 6c. The Integrated Waste Division will assist in improving the effectiveness of the County's Community Alert Network in the vicinity of the landfill. This will be done by identifying addresses within a one-mile radius of the Central Disposal Site that may not be in the Community Alert Network, and sending a mailer to those addresses. The mailer will include a form that the resident can fill out and return to the County if they wish to have their phone number added to the Community Alert Network.

Time of Implementation: Operations

Responsibility: The Site Operations Manager will confirm that the measure has been implemented prior to operation of any of the new or expanded facilities.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Public Health and Safety Mitigation Measures 7a and 7b: Not applicable to this component.

Traffic Mitigation Measure No. 1a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Mecham intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the construction contracts include language allowing the County to restrict construction traffic during the morning peak hour. The Site Operations Manager will confirm that subsequent contracts with operators also include this language, and that the operational procedures incorporate this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigation Measure No. 2a. The Integrated Waste Division will restrict truck traffic that is subject to County control so that trucks do not travel through the Stony Point/Roblar intersection between 7:00 and 8:30 AM. This will apply only to new truck trips associated with the project, and not existing traffic using the Central Disposal Site. The restriction will apply to trucks making deliveries of cover soil and liner materials, trucks associated with construction of any of the proposed project components, and trucks associated with the operation of the household hazardous waste facility, gas fuel facility, and soil bioremediation facility. This measure will remain in effect until a traffic signal has been installed at this intersection.

Time of Implementation: Plan Check, Operations

Responsibility: The Project Manager will confirm that the contract specifications prohibit new truck traffic through the intersection, and that the measure was implemented during construction.
Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Traffic Mitigations 1b, 2b, 3a, 3b, 4, 5a, 5b, 6, 7, and 8. Not applicable to this component

Noise Mitigations 1a, 1b, and 1c. Not applicable to this component.

Noise Mitigation Measure No. 2a. Construction activities at the sites for the household hazardous waste facility, gas fuel facility, public dumping area, and recycle/reuse facility will be restricted to the hours between 7 AM and 5 PM on weekdays, and 9 AM to 5 PM on weekends or holidays.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications require the contractor to comply with the hours of operation, and that this measure was implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2b. The Integrated Waste Division will require that all construction vehicles and equipment be equipped with functioning and properly maintained muffler systems, including intake silencers where necessary.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure No. 2c. Construction equipment or materials storage areas shall be located as far away as practicable from residences.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract specifications include language requiring the contractor to comply with this measure, and will confirm that the measure has been implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Noise Mitigation Measure 2d. The Integrated Waste Division will include noise as an evaluation criterion during facility design and when purchasing new equipment and vehicles for use at the Central Disposal Site.

Time of Implementation: Operations. This measure will be ongoing during the life of the project.

Responsibility: The Site Operations Manager will confirm that this measure has been incorporated into the site operating practices.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Noise Measures 3a and 3b. Not applicable to this component

Biological Resources Mitigation Measure No. 1. The Integrated Waste Division shall create new wetlands and enhance existing wetlands to compensate for the loss of wetlands that will result from the project. The goal of the mitigation shall be no net loss of wetland function or habitat value. To meet this goal, new wetlands will be created and existing wetlands associated with hillside seeps and springs that are presently in a degraded condition will be enhanced. Enhancements will include minor grading to expand the wetland area, fencing to control cattle grazing, and planting native willows. A potential location for this mitigation is the 38-acre parcel that is owned by the County and located on Hammel Road immediately south of the landfill.

The proposed wetland mitigation plan will be reviewed by a qualified biologist and will be submitted to the California Department of Fish and Game for review and comment prior to implementation. Plant material used for this mitigation measure shall be native species propagated from seeds or cuttings obtained within a 10 mile radius of the site.

The mitigation wetlands will be on public land or on private land on which an easement been obtained for this purpose. The wetlands will be managed in such a way as to permanently protect the wetland habitat value. This measure will be implemented during the first year following Board of Supervisors approval of a construction contract for any project component that would fill wetlands.

Time of Implementation: Construction, during the first year following approval by the Board of Supervisors of a construction contract that would result in filling wetlands.

Responsibility: The Project Manager will confirm that the wetland creation/enhancement project has been implemented.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Biotic Mitigation Measures 2, 3, 4, and 5. Not applicable to this component

Land Use Mitigation Measure No. 1a. If the Integrated Waste Division acquires land from the dairy to the north (APN 24-080-18), that portion along the north and east perimeter of the land that is not needed for facilities and associated improvements or landscaping will be retained permanently in agricultural use. This will be done by placing an easement or other deed restriction that identifies that portion of the land that may only be used for agricultural purposes. Permissible agricultural uses are grazing and cultivation of crops.

Time of Implementation: Pre-Construction, Operations

Responsibility: The Site Operations Manager will confirm that the necessary land dedication or easement is made when the property is acquired, and will confirm that the operational procedures are consistent with continued agricultural use of that portion of the land.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Land Use Mitigation Measure No. 1b. If the Integrated Waste Division acquires land from the dairy to the north (APN 24-080-18), a portion of the landfill parcel (APN 24-080-19) along the eastern boundary that is not needed for Central Disposal Site improvements or landscaping will be designated for permanent agricultural use. This will be done by placing an easement or other deed restriction that identifies that portion of the land that may only be used for agricultural purposes. The portion designated for agricultural use will be fenced. Permissible agricultural uses are grazing and cultivation of crops. The area of the landfill parcel designated for agricultural use when added to the area retained in agricultural use by Land Use Mitigation Measure No. 1a will be at least as large as the area of land acquired from parcel 24-080-18.

Time of Implementation: Pre-Construction, Operations

Responsibility: The Site Operations Manager will confirm that the necessary land dedication or easement is placed on a portion of the landfill parcel when the additional property is acquired, and will confirm that the agricultural portion of the landfill parcel is fenced and that the operational procedures are consistent with permanent agricultural use of that portion of the parcel.

Record of Compliance:

Site Operations Manager _____ Date _____

Comments:

Visual Resources Mitigation Measure Nos. 1 and 2. Not applicable to this component

Visual Resources Mitigation Measure No. 3. The Integrated Waste Division will prepare and implement a landscape and screening plan for new structures associated with any of the project components that could be visible from off-site. The plan will include the following features:

1. Retain existing screening trees where practical.

2. Plant new screening trees where they will be effective in blocking off site views of new structures. At a minimum, include a continuous row of trees along the east and north sides of the household hazardous waste and public dumping area. Select and plant species to replicate the pattern of windbreak plantings common in the area, which include Eucalyptus, but will also include native trees such as live oak. Provide irrigation to promote rapid growth.

3. Select earth tone colors (beige, tan, pale green) for new buildings that may be visible from off site.

4. Use low profile, unobtrusive lighting for outdoor lights that could be visible from off site. Where practical, use lights that are normally off, but are switched on by motion sensors so that lights are only used when needed.

5. Plant the landscaping when the public tipping area or the household hazardous waste facility (whichever occurs first) is constructed.

Time of Implementation: Plan Check, Construction, Operations

Responsibility: The Project Manager will confirm that the construction plans and contract specifications include language requiring the protection of screening trees that are to be left in place, that earth tones have been specified for buildings that may be visible from off site, and that building and area lighting has been designed in conformance with this measure. The Project Manager will confirm that the measures were implemented during construction. The Site Operations Manager will confirm that new screening trees have been planted in conformance with this measure.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Site Operations Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 1. An archaeologist will monitor the construction sites of all components except the soil bioremediation facility during the initial site grading. An inspection will be made following removal of vegetation, but prior to deep grading (grading beneath the topsoil). If an archaeological resource is found, grading in the vicinity of the find will cease until an archaeologist has inspected the materials and made recommendations. If human bone is uncovered, all work in the vicinity will halt, and the County Coroner will be notified.

Time of Implementation: Plan Check, Construction

Responsibility: The Project Manager will confirm that the contract special provisions include language that will require the contractor to stop grading in the vicinity of any archaeological resources identified by the archaeological monitor. The Project Manager will confirm that the monitoring was performed and that the requirements of this measure were implemented during construction.

Record of Compliance:

Project Manager _____ Date _____

Comments:

Cultural Resources Mitigation Measure No. 2. Not applicable to this component.

EXHIBIT E

STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE CENTRAL DISPOSAL SITE IMPROVEMENT PROGRAM

Pursuant to California Public Resources Code Section 21081 © and Section 15091 *et. seq* of title 14 of the California Code of Regulations, the Board of Supervisors of the County of Sonoma makes the following statement of overriding considerations:

The Sonoma County Central Disposal Site Improvement Program will have certain significant impacts which are identified in the Final EIR which will not be fully mitigated by mitigation measures, namely those impacts in the area of air quality and odors, noise, land use, and visual resources. In addition, significant unavoidable cumulative impacts have been identified for air quality and odors, traffic and circulation, noise, land use, and visual resources. The Board of Supervisors has carefully considered the proposed project and the unavoidable adverse environmental impacts associated with it and hereby identifies the environmental, economic, legal, social, technological, and other benefits of the project:

Landfill Expansion

1. The additional ten years of landfill capacity that the project would provide will have both public health and economic benefits. In terms of public health benefits, adding the additional landfill capacity will protect the public from health risks associated with exposure to non-managed solid waste disposal which can result from the lack of disposal sites. Without adequate landfill capacity, waste will be disposed randomly along roads as litter or illegal dumps. In particular, by providing convenient and cost-effective alternatives to illegal dumping, the project minimizes the risk of exposing the public to diseases that may otherwise result from the creation of roadside dumps, backyard burning, and littering.

   In terms of economic benefits, the landfill expansion would continue landfilling as a means of refuse disposal, which was found by the County-wide Integrated Waste Management Plan to provide lower refuse disposal costs than other alternatives. In addition, the proposed project will make efficient use of the existing landfill parcel for refuse disposal, thereby providing County residents the maximum benefit from the funds already expended in developing the landfill and associated infrastructure.

2. The environmental impacts associated with refuse disposal would be minimized since the landfill expansion would allow continued disposal of the County's solid waste in a regulatory-compliant facility as opposed to a non-regulatory compliant manner (e.g., road side dumps, backyard burning, littering) which could result in more significant adverse air, water, soil and biological impacts.

3. The landfill expansion component of the project would provide convenient and cost-effective disposal services which avoids the negative public reactions that may be prompted by roadside dumps, littering, etc. Alternatives to the project are more expensive and/or less convenient to the public.

4. Construction of the landfill expansion will ensure that solid waste infrastructure is in place to accommodate the existing citizens and projected new development within the County.

5. The landfill expansion component of the project will provide disposal capacity during the time that it will take to develop a new disposal site to satisfy the longer term (50 year) disposal needs of the County. Through this action, the County will avoid the environmental impacts and loss of local control that results when waste must be transported to other jurisdictions for disposal.

6. The landfill expansion will demonstrate landfill capacity at least through the year 2009, as required by State law.

Household Hazardous Waste Facility

1. This facility would provide a safe, convenient, and economical means to collect and dispose of household hazardous waste, consistent with the adopted CoIWMP. This would benefit the public because it would discourage improper disposal of hazardous waste at the landfill, thereby reducing the potential for adverse impacts on groundwater, and because it would reduce the amount of illegal dumping or other improper disposal of hazardous waste elsewhere in the County, thereby reducing the potential for adverse public health effects that might result from exposure of hazardous wastes to people or the environment.

Gas Fuel Facility

1. The facility would treat the landfill gas as a resource and use it in an economically and environmentally beneficial way. It would be economical because compressed gas fuel could be produced more cheaply than an amount of gasoline or diesel fuel having equivalent energy content. It would be environmentally beneficial because it would promote the use of natural gas vehicle fuel in place of gasoline or diesel fuel, which would reduce vehicle air emissions.

Soil Bioremediation Facility

1. The facility would provide a place where soil from construction sites brought to the landfill for disposal can be tested for petroleum hydrocarbon contamination, reducing the potential that contaminated soil could inadvertently be accepted for use as cover soil at the landfill, and thereby reducing the potential for contamination of surface or groundwater.

2. The facility would provide the public an environmentally safe and economic way to treat and dispose of hydrocarbon-contaminated soils, thereby reducing the potential that such soils would remain untreated or be treated in a way that is not environmentally safe.

3. The facility would provide a source of additional cover soil for the landfill.

Operational Improvements

1. The new public tipping area would improve safety, reducing the potential that the public could be injured in accidents at the present "open pit" tipping area.

2. The new layout of facilities proposed by the project would create a traffic pattern in the Central Disposal Site that would place the Household Hazardous Waste and Recycle facilities ahead of the public tipping facility, thereby encouraging the public to use these facilities prior to visiting the public tipping area. This would further the CoIWMP goal of increasing the diversion of materials from the waste stream, which would provide the following benefits to the public: conservation of natural resources through recycling; conservation of energy through recycling and reuse; and conservation of landfill capacity.

3. The new public tipping area would remove the need to repeatedly construct temporary public dumping areas and access roads at the landfill, thereby reducing operating costs.

The Board of Supervisors has weighed the above benefits of the proposed Central Disposal Site Improvement Program against its unavoidable environmental risks and adverse environmental effects identified in the final EIR. The Board hereby finds that the unavoidable impacts have been reduced to the extent practicable by the inclusions of the mitigation measures set forth in Exhibits B-1 and B-2, and determines that the benefits described above outweigh the risks and adverse effects and, therefore, determines that these risks and adverse environmental effects are "acceptable".

The Board of Supervisors has further considered the unavoidable cumulative traffic impacts of the proposed project at Commerce Boulevard, in Cotati, and finds that traffic improvements needed to mitigate this cumulative impact to a less than significant level are within the responsibility and jurisdiction of other public agencies and not the County of Sonoma. Such changes should be adopted by such other agencies.

APPENDIX B

Waste and Waste Handling

APPENDIX B-1

Sludge Testing Procedure

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Susan R. Klassen
Division Manager
Engineering and Operations

Refuse Bulletin No. 117 (8-14-97)

LANDFILL PROCEDURE FOR HANDLING AND DISPOSING OF DEWATERED SLUDGE

The Sonoma County Central Landfill located at 500 Mecham Road is permitted as class III landfill and will not accept waste which is defined as hazardous by RCRA and / or CCR Title 22.

The Sonoma County Central Landfill will however accept dewatered sludge that has been determined non-hazardous and which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentation of testing results, origin, location of sampling, licenses, permits and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any and all dewatered sludge from disposal at County Landfills without cause.

REQUIRED INFORMATION:

1. Amount of dewatered sludge to be disposed measured in tons.
2. Location where the sludge was generated.
3. Site address, name and address of the generator.
4. All laboratory results by a commercial laboratory, certified by the State of California.
5. Chain of custody documents.
6. All data submitted must be less than three (3) months old and on certifying laboratories' letterhead.
7. The source and matrix of the waste sample must be identified on report.
8. The analytical results must identify units of measure as shown in the acceptance limit.
9. A schedule for disposal.

Sample collection and analyses:

Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be a representative sample; a representative sample is defined as a sample which can be expected to exhibit the average properties of the materials being tested.

It is the sole responsibility of the owner/generator to characterize the waste as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill acceptability and will not assume responsibility for such characterization.

Below are the Sonoma County Central Landfill's Pre-disposal Testing Requirements for dewatered sludge. All tests should be performed on four-point composite samples.

1. One (1) analyses for the RCI (Reactivity, Corrosivity, Ignitability) to determine whether or not a waste exhibits any hazardous characteristics.

Substance		Recommended EPA Test Method
Reactivity:	STLC Reporting Limit	
Sulfide	10.00 mg/l	9030 or 376.1
Cyanide	0.20 mg/l	9010 or 335.2
Corrosivity:	Reporting Limit	
pH range	6 to 9.5	9045 or 150.1
Ignitability:	Reporting Limit	
Flashpoint	>140 deg F or 60 deg C	1010

2. One (1) analyses for the list of Inorganic Toxic Substances.

Substance	STLC Reporting Limit	Recommended EPA Test Method
Antimony	15.00 mg/l	6010 or 7040 or 7041
Arsenic	0.25 mg/l	6010 or 7060 or 7061
Barium	50.00 mg/l	6010 or 7080 or 7081
Beryllium	0.50 mg/l	6010 or 7090 or 7091
Cadmium	0.04 mg/l	6010 or 7130 or 7131
Chromium (VI)	1.71 mg/l	7198 or 7195 or 7196 or 7197
Chromium (III)	5.00 mg/l	6010 or 7190 or 7191
Cobalt	2.50 mg/l	6010 or 7200
Copper	0.20 mg/l	6010 or 7210 or 7211
Lead	0.30 mg/l	6010 or 7420 or 7421
Mercury	0.0003 mg/l	7470 or 7471
Molybdenum	0.50 mg/l	6010

Nickel	1.51 mg/l	6010 or 7520 or 7521
Selenium	2.70 mg/l	6010 or 7740 or 7741
Silver	2.50 mg/l	6010 or 7760 or 7761
Thallium	3.90 mg/l	6010 or 7840 or 7841
Vanadium	1.00 mg/l	6010 or 7910 or 7911
Zinc	1.63 mg/l	6010 or 7950 or 7951

3. One (1) analyses for the list of Organic Toxic Substances.

Substance	STLC or TCLP Reporting Limit	Recommended EPA Test Method
Aldrin	0.140 mg/l	8010
Benzene	0.010 mg/l	8260 or 8020 or 8024
2-Butanone (MEK)	3.000 mg/l	8260
Chlordane	0.250 mg/l	8080
Diesel (TPH)	0.150 mg/l	8080
Gas (TPH)	0.150 mg/l	8080
Motor Oil (TPH)	0.150 mg/l	8080
DDT, DDE, DDD	0.100 mg/l	8080
2,4-Dichlorophenoxyacetic acid	10.000 mg/l	8150 or 8250
Dieldrin	0.800 mg/l	8080
Dioxin (2,3,7,8-TCDD)	0.001 mg/l	8280
Endrin	0.020 mg/l	8080 or 8250
Ethylbenzene	0.450 mg/l	8260
Heptachlor	0.470 mg/l	8080 or 8250 or 8260
Kepone	2.100 mg/l	8080
Lindane	0.400 mg/l	8080 or 8250
Methoxychlor	10.000 mg/l	8080
Mirex	2.100 mg/l	8270
Phenol	0.075 mg/l	8270 or 8040 or 8250
Pentachlorophenol	1.700 mg/l	8270 or 8040 or 8250
Polychlorinated biphenyls (PCBs)	0.0075 mg/l	8080
Styrene	0.150 mg/l	8260
Tetrachloroethylene (PCE)	0.075 mg/l	8260 or 8240
Toluene	0.600 mg/l	8260 or 8020 or 8024
Toxaphene	0.500 mg/l	8080 or 8250
Trichloroethylene	0.075 mg/l	8260
2,4,5-Trichlorophenoxypropionic acid	1.000 mg/l	8150 or 8250
Vinyl Chloride	0.030 mg/l	8260 or 8010 or 8240
Xylene	0.300 mg/l	8260 or 8020 or 8240

4. One (1) testing of dewatered sludge solid percentage in accordance to Title 23 CCR section 2523.

Testing	Reporting Limit	Recommended EPA Test Method
% Solid		
Primary	at least 20% solid	EPA 160.3
Secondary	at least 15% solid	EPA 160.3

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

APPLICATION TO DISPOSE OF DEWATERED SLUDGE

I. Sludge Generator:
Name, Co., Corp._____
Address_____City_____Zip_____

II. Sludge Location:
Site Address_____City_____Zip_____
Assessors Parcel Number_____

III. Sludge Disposition:
Is this a one time request? If not, state frequency_____
Quantity to be disposed:_____CYs/Tons; Duration_____
% Solid_____Primary/Secondary/Others

IV. Process that generate sludge. Attach copies of permits, license State, Federal or County.
_____

V. Method of Hauling: List Federal, State or local permits obtained to transport sludge and attach a copy of each._____

The County of Sonoma accepts dewatered sludge at its landfill sites between March and October each year. Before any sludge is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and / or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 117 should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the sludge by mail within about two (2) weeks.

I certify that all information submitted herewith is truly representative of the above described sludge and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name:

_____
Signature of Generator

APPENDIX B-2

Household Hazardous Waste Exclusion Program

COUNTY OF SONOMA

HOUSEHOLD HAZARDOUS WASTE

EXCLUSION PROGRAM

REVISED OCTOBER, 1997

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ORGANIZATION

I. PERSONNEL: (POSITIONS)
ONE MANAGEMENT PERSON
ONE HAZARDOUS WASTE INSPECTOR
SIX HAZARDOUS WASTE SPOTTERS
CONTRACTOR

A. RESPONSIBILITIES:

1. MANAGEMENT

   a To implement a comprehensive Hazardous Waste screening program and provide a service for the disposal of hazardous and non hazardous waste.

   b. To insure that funds and adequate personnel are available for the implementation and on-going operation of the Household Hazardous Waste Program, including public information and education.

2. HAZARDOUS WASTE INSPECTOR

   a. Will be responsible for the HHW training program.

   b. Will be responsible for load checking and screening activities, which will include notification to violators and follow up.

   c. Will maintain accurate records on all activities; including the HHW day events.

   d. Will be responsible for Emergency Response Procedures, which will include storage of HHW, when the generator is not identified.

3. HAZARDOUS WASTE SPOTTERS

   a. Will assist the HW Inspector in load checking responsibilities, and survey incoming loads.

   b. Will assume the HW Inspector's responsibilities in his absence.

4. CONTRACTOR

   a. An independent contractor will be hired to perform all the Houselhold Hazardous Waste day events, which includes: Identification, Packaging and Transporting of all HHW to a Class I landfill or other approved disposal facility.

b. Any waste material found by the Contractor to be recycable item will be handled accordingly.

PUBLIC INFORMATION AND EDUCATION

A. The intent of this program is to provide information and education to the public on waste entering our disposal facilities. Waste that can safely be disposed at the landfill and waste that poses a threat to public health and the environment.

B. The information will be designed to notify the general public on rules and regulations governing non-acceptable material that may be entering our waste stream at the various disposal facilities. This information will include a genral outline describing the load checking program and provide alternative disposal options when household hazardous waste is found.

C. A customer handout will be prepared by the Sonoma County Public Works Refuse Division and distributed by county gate personnel at the various disposal facilities. The handout will contain guideline for Household Toxic Materials which will include reuse and disposal. Also a list of prohibited waste not allowed into the county disposal facilities.

This list will contain, but is not limited to, the following:

1. All Liquids
2. Anti-Freeze
3. Asbestos
   (Under consideration for special handling)
4. Auto Batteries
5. Explosives
6. Fluorescent Tubes
7. Compressed Gas Cylinders
8. Gasoline
9. Loads of Detergent
10. Mercury
11. Paint (empty/dry containers are okay)

12. Pesticides
13. Petroleum Products
14. Radio Active Material
15. Septage
16. Any Products not authorized for landfilling

D. Additional Information and Public Announcement will be placed in the local newpaper, on local radio and shown on local T.V. stations.

SELECTION DATES OF IMPLEMENTATION

The proposed program will have a brief review and comment period with various Regulatory Agencies and parties who have an interest in excluding Household Hazardous Waste from the waste stream. We anticipate that the program will be implemented according to the following schedule:

1. Review period completed by June 30,1990.
2. Personnel to receive HHW Training by July 30, 1990.
3. In the late summer of 1990, a date will be selected for starting the random load checking program.
4. Quarterly date will be targeted for the Household Hazardous Waste Day Events on weekends, which will begin within 90 days of the random load checking program.

SIGNS AT THE FACILITY

At each facility a specific set of signs will be posted concerning waste acceptance and the load checking program. The signs shall contain, certain but not limited to, the following language:

1. This Landfill or Transfer station will not accept Hazardous Waste including pesticides, herbicides, solvents, gasoline, paints, acid, caustic solutions, etc.
2. A Hazardous Waste Load-Checking Programs is in effect at this facility.
3. If hazardous or other unacceptable waste are delivered to a facility, the party responsible for

generating and/or transporting the waste will be billed for the removal and disposal of such waste to state approved facilities.

4. Information of upcoming Household Hazardous Waste Day Events.

PERSONNEL TRAINING AND RESPONSIBILITIES

The Sonoma County Public Works, Refuse Division, has adopted rules and procedures for employees who will be trained to effectively carry out our County and State, programs and policies. State policy requires that key Division employees will be certified, authorized and responsible to:

1. Screen loads for hazardous wastes.
2. Investigate all suspicious loads.
3. Follow policy when hazardous wastes are found.
4. Suspicious loads shall be recorded (whether rejected or not), on the hazardous waste screening form.
5. Identify hazardous wastes that should not be allowed into County Disposal facilities.
6. Use Materal Safety Data Sheets (MSDS).
7. Know product labels and warnings.
8. Have proper work clothing and equipment.
9. Know emergency response procedures.
10. Make proper judgment concerning suspected loads of hazardous waste.
11. Have copies of the policies and other related paper work.
12. Treat customer's firmly, but courteously.

A. TRAINING

Training will be provided to assist employees in recognizing the type of wastes that could be hazardous if disposed of at the County Facilities. The hazardous properties include: flammable, corrosive, relative, toxic and infectious. Agricultural, common industrial and household products that contain these hazardous properties will not be permitted at the landfills or transfer stations.

Suspicious loads shall be investigated and a screening form completed before accepting or turning away the load. If accepted, the customer may be required to complete a declaration of non-hazardous waste; unacceptable loads are to be removed by customer, residential generator or commercial hauler.

Employees will be required to exercise caution to protect themselves, other employees and the public from hazardous waste, this includes wearing protective equipment in handling hazardous waste, and promptly reporting any spills or questionable matter to the supervisor. All site personnel will receive training in the identification of hazardous waste, key program personnel will receive appropriate training on identification and handling. All site personnel will be made familiar with emergency response procedures.

Several staff members will be trained and certified in Red Cross First Aid and CPR (Cardiopulmonary Resuscitation). Baseline and annual physical examination will be administered to all employees participating in the hazardous waste program.

CONCLUSION:

Awareness Training and Edcuation are the cornerstone of the hazardous waste program.

Residential customers bringing material for disposal will or should be given information regarding safe alternatives to hazardous material.

Commercial and industrial generators will be given a packet of information about hazardous waste handling and other disposal alternatives.

Employee training and aggressive inspection of waste loads should provide satisfactory results towards the exclusion of household hazardous loads incorporated with public education and awareness.

PROTECTIVE EQUIPMENT

Sonoma County Refuse Division employees involved with the HHW program will be required to wear protective equipment to protect themselves, other employees and the public from hazardous waste. This will include, but not limited to the following:

1. Disposable Gloves
2. Disposable Suits
3. Safety Goggles
4. Dust masks
5. Steel-toed boots

Other equipment available:

1. Two Self-Contained Breathing Apparatus (SCBA)
2. Chemical Cartridge Full Face Respirators and Filters
3. 5min. emergency air bags
4. An emergency shower and eyewash station
5. Fire extinguisher's (A B C Class)
6. Hand held two-way radio, capable of summoning emergency assistance
7. Mobile and base station radios
8. Spill control equipment
9. 3000 gallon water truck or water tank

IN ADDITION

The Sonoma County Refuse Division will develop a contingency plan to minimize any adverse effect to human health or the environment from fires, explosions or any unplanned sudden or continuous release of hazardous waste to air, soil or surface water. The provisions of the contingency plan shall be carried out immediately whenever there is a threat to human health or the environment.

DESCRIPTION OF SCREENING PROCESS

A major element in the Household Hazardous Waste exclusion program, for the Sonoma County Solid Waste Facilities, is the random load checking program. This program is designed to check public and commercial vehicles on a two day per week basis at the Central Disposal Site and a two day per month basis at the Transfer Stations.

The Hazardous Waste Inspector will designate a location for inspecting the waste at the various facilities and isntruct the driver to pull forward while unloading. When necessary, the unloaded waste will be spread by a backhoe to form windrows. Spotters will then sort through the waste with rakes and shovels. During the sorting operation the material will be carefully inspected for any hazardous or other unacceptable waste. When a random load is selected for inspection, the following information will be recorded on a form prior to the sorting:

1. Date and time
2. Name of the hauling firm and source
3. Name of the driver
4. Truck number and/or license number
5. Any phone numbers
6. Comments, obvservations, notes

After completing the form a copy will be given to the driver. If any hazardous waste is found during the inspection, the Hazardous Waste Inspector or his spotter will isolate the area; then a procedure to identify the source through a thorough inspection of the area for letters or other evidence will be conducted and data retrieved.

At the end of the inspection period, the hauler will be held responsible for removal of the non-acceptable waste. The County will them provide a copy of any collected information on the generation of the waste as an aid for the hauling firms effort to identify the generator.

If any free draining fluids are encountered during the load checking process, the Hazardous

Waste Inspector will conduct a simple field test, such as ph of flammable test by using a spoon or match collect and record any comments on the source of the liquids. If liquids are found to be hazardous, the waste inspector or spotter will resort to an emergency procedure.

In addition to the form used for the screening process another form will be used for the declaration of non-hazardous waste that appears to be suspicious to the County, but customer claims non-hazardous. This form will be maintained for record keeping by the County Refuse Cashier at the facility gate. In the event a customer will not acknowledge responsibiltiy or fault or does not adhere to the recgnition of a hazard problem, the County will take the necessary steps such as notifiying the District Attorney of the incident.

HOUSEHOLD HAZARDOUS WASTE (HHW) DAY EVENT

To meet the requirements of the current legislation like State Assembly Bills AB939 (Sher) and AB888 (LaFollette) requiring household hazardous waste programs with hazardous waste collection. Sonoma County is developing a comprehensive hazardous waste program called a 1 day event (Periodic Collector Program) within a 90 day cycle, which is to encourage the public to participate in this event and to discourage from placing hazardous waste or other unacceptable waste in the landfill.

The key to this program is to focus on the hazardous wasate delivered by the public. The County of Sonoma will select a contractor and train county staff, who will be responsible for the management of the one day events.

The householder is encouraged to use up or give to neighbors any usable item. The object is to educate residents and to persuade them to use up and reduce the amount of hazardous material delivered for disposal.

When a residential customer arrives at the site with the hazardous materials, he/she is met by the Waste Inspector. The customer must provide proof of residence within the Sonoma County area

and is them asked to answer some questions about the origin of the waste and thoughts about the program. The waste inspector will direct the householder to the designated area. The householder will not be allowed to handle the material. Each container will be inspected and recorded on aninventory sheet and assigned a number for the householder. This allows for tracking each contrainer during the 144 hour storage period. If an unacceptable material is encountered during this process and found to be extremely dangerous it will be isolated and the proper agency notified.

DISPOSAL OF HOUSEHOLD HAZARDOUS WASTE (HHW)

The Sonoma County Dpartment of Public Works, Refuse Divsion will mail notices to commercial customers advising them fo tthe following general information:

A. Hazardous wastes are not to be accepted at the Sonoma County Refuse Facifilities and should not be placed in refuse containers for collection.

B. A load checking program is in effect at all the refuse facilities for detecting hazardous and other unacceptable wastes.

C. There are Federal and State penalties for the improper disposal of hazardous and certain other types of wastes.

D. The HHW inpsector will be responsible for the proper handling of HHW that is detected.

E. Site personnel will ask customers to retain certain items aboard their vehicles when they leave the landfill or transfer stations, or they may be redirected to an alternative disposal option. Such request will be made to assure the safety of our customer's and employees and/or the environmental security of the landfill.

F. If the producer of the waste is not known, the hauler will be responislbe for all costs incurred in the proper clean up, transport and disposal of the waste. If the producer of the HHW is identified through load checking program, the information on the generator will be supplied to the hauler for his firm.

G. In all cases the District Attorney/Sheriff will be notified of any attempts by anyone to dispose of a hazardous waste at any Sonoma County Refuse Facility.

Conclusion:

In addition, various other measures will be employed to assist in exclusion of hazardous and any other unacceptable waste from the sites. Procedures will be established for the safe handling and disposal of any unacceptable wastes from the sites, should they be identified through the program. It will be the policy of the Sonoma County Pubvlic Works, Refuse Division that throughout the waste handling process the site personnel will follow the proper safety procedures for the protection of the public and the site employees.

The Hazardous Waste Policy Rules and Procedures will apply to all Sonoma County Landfills and Transfer Station, all facility employees and to all facility customers.

STORAGE

Provisions for storage of hazardous waste found during normal operating hours and not during the load checking operation, at County owned facilities will be handled by Refuse Dvision Personnel and the Refuse Division Contractors. Any hazardous waste material found during this period will be stored in leak and explosion proof buildings meeting the state-of-art recommended specification.

Characterization of the material will be the first step in identifying the waste. If the waste is in the original container and the hazardous components can be read from the label and can be identified as combustable, toxic, flammable, caustic or an oxidizer, it would then be stored in the proper hazardous waste containment for a period not to exceed 90 days.

A material that cannot be identified immediately, but is contained, will be removed from the area and kept in separate storage facility for further identification.

At all times, inventory will be kept on the contents for the hazardous waste sotrage building. This inventory will be available in the event of an emergency for proper response.

EMERGENCY RESPONSE PROCEDURES

The Sonoma County Refuse Division Household Hazardous Waste Inspector will be responsible for enforcing the following emergency response procedures for the protection of the public and the employees.

The first step will be:

A. Call Law enforcement (dial 911)

The 911dispatcher will contact the appropriate law enforcement agency who will send an officer to act as the Incident Commander. The Incident Commander will be responisble for the management of the scene and coordination of the activities of all agnecies responding.

B. The HHW inspector will act as the Interim Incident Commander until the Incident Commander arrives and will be responsible for the following:

1. Isolation of area for public and employee protection.
2. Identification of waste material if possible
3. Provide spill containment equipment and materials if needed.

The second step will be:

A Identification

If the material is unidentified, the incident commander will arrange for identification.

1. He will first call (through the Sheriff's dispatcher) the hazardous material specialist from the County Hazmat Unit.
2. If the County Hazmat Unit cannot identify it, the Incident Commander will call the County Hazardous Materials Response Team from the Santa Rosa Fire Dept. Identification may take 24 hours or longer.
3. Non-hazardous Materials

As determined by the Incident Commander, if the material is non-toxic, non-caustic or does not pose a health threat to the public or refuse division personnel and the incident occurs on a County Disposal Site, the Refuse Dvision will be responsible for the clean up.

4. Hazardous Materials

As determined by the Incident Commander, if the material is toxic, caustic or poses a health threat to the public or refuse division personnel, the IC will first give the responible party the option of cleaning up the spill. If they refuse, or can't, the IC will arrange for clean up by others.

This emergency response procedure is subject to change due to changing regulations or policy review.

BUDGET CONSIDERATIONS

Budget:

Considerations have to be taken to devleop, implement, operate and maintain the exclusion program and the one day collection event (periodic collection progam).

We feel that the incorporation of the load checking program and the collection day event will be a good solution to the disposal dilemna faced by householders.

Cost Summary:

The focus of the program shall be towards the staff and what the cost will consist of.

1. Administraiton
2. Waste Inspection
3. Emergency Response and Clean-up
4. Service and Material
5. Hazardous Waste Storage Units
6. Safety Supplies and Equipment
7. Training
8. Packaging - Sorting, Labeling, Manifest
9. Disposal and Transportation of HHW to recycling and/or treatment facility, or Class I landfill
10. Collection Day Event (four times a year)
11. Signs
12. Monitoring Devices
13. Forms and Documentation
14. First Aid and CPR Training
15. Insurance

Conclusion:

The feeling is that the cost of the hazardous waste exclusion program incorporated with the one day colletion event will reduce the amount of hazardous waste originating from Commercial and residential haulers.

The solution to the problem is to educate people, not to generate hazardous waste. Householders bringing material for disposal shall be given a packet of information regarding safe alternatives to hazardous material.

RECORD KEEPING & PROGRAM ASSESSMENT

The Public Works, Refuse Division will be maintaining complete records on all Commercial haulers that are imspected at the various refuse faciltites, these records will be maintained at the refuse operation headquarters and subject to review by the various regulaltory agencies.

Information requested on the form, will consist of but not limited to the following:

A. Date
B. Time
C. Driver Name
D. Source of Waste
E. Vehicle Identification
F. Inspector's Observation
G. Storage
H. Disposal
I. Comments
J. Inspector Signature

Records will be kept on all random load checking on residential haulers and special types of incoming loads. The HHW inspector shall be responsible for keeping a supply of forms available at all times for the County Landfill and Transfer Station personnel. Additional records will be kept on all Hazmat incidents with copies forwarded to the County Fire Services.

A. OVERALL ASSESSMENT OF PROGRAM

On an annual basis, the Sonoma County Public Works, Refuse Division, will be assessing the performance and cost of the various elements of the hazardous waste exclusion program. The elements will consist of:

1. Awareness

   Concern for human safety and the environment from improper disposal practices in the past.

   Concern for hazardous waste that can have detrimental effects on humans who come in contact while handling and disposing of said waste.

   Concern that individuals and industry may attempt disposal of hazardous waste at the Sonoma County Disposal Facilities and Transfer Stations through carelessness or to avoid the high cost of proper disposal.

2. Effectiveness

   Assure that no hazardous wastes are being accepted at the various Transfer Station and Disposal Faciltities.

   Assure that all waste requiring special handling are properly handled and disposed of.

   Assure that all Refuse Facility personnel are adequately trained and adequately equipped to carry out the load checking and screening program.

   Assure that all parties involved in dumping of HHW at a non-permitted facilities are held accountable for its removal.

3. Overall Cost of Program

   All cost associated with the Household Hazardous Waste Exclusion Program which accumulate during the first year of operation will be evaluated and used as a budget consideration to finance the on-going program.

APPENDIX B-3

Phasing, Excavation and Stockpiling Plan

APPENDIX B-4

Final Report for Alternative Daily Cover

Final Report for Alternative Daily Cover at the Sonoma County Central Landfill

I. Introduction

This project was conducted to demonstrate that alternative daily cover (ADC) can be used effectively to maintain environmental controls, save landfill space, reduce the need for soil and reduce costs for daily cover material.

Sonoma County Department of Health Services, Environmental Health Division is the designated Local Solid Waste Enforcement Agency (LEA) for the County of Sonoma. In that capacity, the LEA regulates the Sonoma County Central Landfill. In October, 1995, the Integrated Waste Division received approval from the LEA to commence a demonstration project using two different types of alternative daily cover (ADC) material: (1) ELC Synthetic Cover; and, (2) shredded green waste (SGW). As a condition of approval, the LEA was to assume the responsibility of monitoring the demonstration project for compliance with the performance standards criteria at the frequencies specified in 14 CCR 17683. They would also evaluate the ability of the ADC to control vectors, odors, litter, fire and moisture infiltration.

The LEA monitored the program under the direction of the California Integrated Waste Management Board (CIWMB), and submitted monthly reports during the demonstration project. This final report will summarize the monitoring data provided by the LEA during the course of the demonstration project and is being submitted to the CIWMB for consideration of approving the ADC in the revision of the Central Landfill Site Solid Waste Facilities permit.

II. Project

The demonstration project, implemented by the landfill operator and monitored by the LEA, was proposed as a one year project to begin in September, 1995. However, due to delays in the approval process the project did not begin until January, 1996. During the course of the one year demonstration project, ADC was applied only to the working face of the landfill. The ELC was used approximately 60% of the time, SGW approximately 5% and soil was used 35% of the time.

A. ELC Synthetic Cover (ELC)

The ELC used is a degradable 3 mil polyethylene film, containing a photo/thermal degradant to ensure complete degradation once buried in the waste. It is deployed by a *Landfill Rover*, a device which attaches to the blade of a dozer or compactor. The *Landfill Rover* holds a combined one cubic yard of ballast-soil (dirt or aggregate) in two hoppers, which automatically deposits, in windrows, an anchor for the film from the unit's spreader bar as a dozer or compactor backs up. The *Landfill Rover* can deploy approximately 10,000 square feet of film, using one (1) cubic yard of ballast soil, which translates to a daily savings of 184 cubic yards of soil for each 10,000 square feet to meet the 6 inch soil requirements.

than the ELC. County staff estimates that by using the ELC, 25,000 cubic yards of landfill space, or 42,000 tons of waste.

* There was a savings associated with the *reduced labor* and *equipment needed* to gather the 4,000 cubic yards of soil required each month for daily cover. Labor for the daily cover operation was essentially cut in half, the use of scrapers was reduced by 15% which resulted in reduced loss of tires (the soil used for cover is very rocky and leads to a high loss of scraper tires).

* *Increased safety* when deploying the ELC on very steep slopes requires only one pass as opposed to several passes required when using soil.

* The ELC provides a continuous uninterrupted barrier to odors, rain infiltration, gas migration. The degradable film maintains fluid circulation within the landfill as the waste decays, while improving the economics of leachate management by providing a barrier to rainfall infiltration at the surface.

* The earth brown, opaque color of the ELC prevented scavenging birds from seeing any enticing morsels in the waste.

V. Conclusion

Overall, the use of the ELC synthetic cover and shredded green waste as alternative daily cover materials have shown to be suitable substitutes for soil when applied in accordance with the specified program operated in this demonstration project. The LEA recommends the use of these materials as an approved daily cover.

c:/central/fnlrpt

APPENDIX B-5

Refuse Bulletins for Handling of Special Waste

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE, PLS
Division Manager
Engineering and Operations

Refuse Bulletin No. 116 (08-04-97)

LANDFILL PROCEDURE FOR HANDLING AND DISPOSING OF SPECIAL WASTE

The Sonoma County Central Landfill located at 500 Mecham Road is permitted as a Class III landfill and will not accept waste which is defined as hazardous by RCRA and / or CCR Title 22.

Special Waste is defined as waste determined by the County of Sonoma requiring special handling. The Sonoma County Central Landfill will however accept special waste that has been determined non-hazardous and which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentation of testing results, origin, location of sampling, licenses, permits and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any special waste from disposal at County Landfills without cause.

ITEMS TO BE SUBMITTED ALONG WITH TEST RESULTS:

- ☐ Plot plans with location of where samples were taken, location and disposition of special waste, eg; in situ, stocks pile, containers, others.
- ☐ All laboratory results by a commercial laboratory certified by the State of California.
- ☐ Chain of Custody Documents
- ☐ All data submitted must be less than one (1) year old and on certifying laboratories' letterhead.
- ☐ The source and matrix of the special waste sample must be identified on report.
- ☐ The analytical results must identify units of measure.
- ☐ Material Safety Data must be submitted.

SAMPLE COLLECTION AND ANALYSES:
Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be a representative sample; a representative sample is defined as a sample which can be expected to exhibit the average properties of the contaminated materials being tested.

It is the sole responsibility of the owner/generator to characterize the material as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill acceptability and will not assume responsibility for such characterization.

Below are the Sonoma County Central Landfills' Pre-disposal Testing Requirements and Acceptance Limit.

SUBMIT ONLY ITEM(S) BELOW WITH A CHECK MARK:
One (1) composite of four samples for RCI (Reactivity, Corrosivity, Ignitability) analyses to represent the total cubic yards of material.

	Central Landfill Acceptance Limit
☐ Reactivity:	
Sulfide	<100mg/kg
Cyanide	<10 mg/kg
☐ Corrosivity:	
pH range	5 to 10
☐ Ignitability:	
Flashpoint	>140 deg F or 60 deg C

One (1) composite of four samples every 100 cubic yards maximum for TPH as gasoline, TPH as diesel, TPH as motor oil, BTEX (Benzene, Toluene, Ethylbenzene, Xylene), Organic Lead and Phenol analyses to represent the total materials to be disposed.

Substance	Central Landfill Acceptance Limit
☐TPH as gasoline	25 ppm (mg/kg)
☐TPH as diesel	50 ppm (mg/kg)
☐TPH as motor oil	50 ppm (mg/kg)
☐Organic Lead	13 ppm (mg/kg)
☐Phenol	0.01 ppm (mg/kg)
☐BTEX	
Benzene	0.01 ppm (mg/kg)
Toluene	15 ppm (mg/kg)
Ethylbenzene	15 ppm (mg/kg)
Xylene	15 ppm (mg/kg)

☐ One (1) composite of four samples every 500 cubic yards maximum for the list of Inorganic Toxic Substances.

Substance	Central Landfill (MG/L) Acceptance Limit
Antimony	15 mg/l
Arsenic	0.25 mg/l
Barium	50 mg/l
Beryllium	0.75 mg/l
Cadmium	0.04 mg/l
Chromium (VI)	2.5 mg/l
Chromium (III)	5 mg/l
Cobalt	2.5 mg/l
Copper	2.5 mg/l
Fluoride salts	180 mg/l
Lead	0.3 mg/l
Mercury	0.0003 mg/l
Molybdenum	0.5 mg/l
Nickel	1 mg/l
Selenium	1 mg/l
Silver	2.5 mg/l
Thallium	1 mg/l
Vanadium	1 mg/l
Zinc	1 mg/l

☐ One (1) composite of four samples every 500 cubic yards maximum for the list of Organic Toxic Substances.

Substance	Central Landfill (MG/L) Acceptance Limit
Aldrin	0.14 mg/l
2-Butanone (MEK)	3.0 mg/l
Chlordane	0.25 mg/l
DDT, DDE, DDD	0.1 mg/l
2,4-Dichlorophenoxyacetic acid	10 mg/l
Dieldrin	0.8 mg/l
Dioxin (2,3,7,8-TCDD)	0.001 mg/l
Endrin	0.02 mg/l
Heptachlor	0.47 mg/l
Kepone	2.1 mg/l
Lindane	0.4 mg/l
Methoxychlor	10 mg/l
Mirex	2.1 mg/l
Pentachlorophenol	1.7 mg/l

Polychlorinated biphenyls (PCBs)	0.0075 mg/l
Styrene	0.15 mg/l
Toxaphene	0.5 mg/l
Trichloroethylene	0.075 mg/l
2,4,5-Trichlorophenoxypropionic acid	1.0 mg/l
Vinyl Chloride	0.03 mg/l

☐ One (1) testing of solid percentage

Testing	Central Landfill Acceptance Limit
% Solid	at least 15% solid

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500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE, PLS
Division Manager
Engineering and Operations

APPLICATION TO DISPOSE OF SPECIAL WASTE

I. Special Waste Generator:
Name, Co., Corp._____
Address_____City_____Zip_____

II. Special Waste Location:
Site Address_____City_____Zip_____
Assessors Parcel Number

III. Special Waste Disposition:
Quantity to be disposed_____Cubic Yards.
wet____dry_____mixed_____stockpile_____ drum_____ other_____
_____

The County of Sonoma accepts special waste requiring special handling at its landfill sites. Before any special waste is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and / or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 116 should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the special waste and what special handling is required.

I certify that all information submitted herewith is truly representative of the above described special waste and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name

_____
Signature of Generator

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Susan R. Klassen
Division Manager
Engineering and Operations

Refuse Bulletin No. 100 (revised March 1999)

LANDFILL PROCEDURE FOR HANDLING AND DISPOSING OF CONTAMINATED SOIL

The Sonoma County Central Landfill located at 500 Mecham Road is permitted as a Class III landfill and will not accept waste which is defined as hazardous by RCRA and/or CCR Title 22.

The Sonoma County Central Landfill will however accept non-hazardous petroleum contaminated soil which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentation of testing results, origin, location of sampling and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any and all soil from disposal at County Landfills without cause.

Required Information:

1) Amount of soil to be disposed measured in cubic yards.
2) Plot plans with location of where samples were taken, location and disposition of soil, e.g.; in situ, stocks pile, containers, others.
3) Site address, APN and owners name and address.
4) All laboratory results by a commercial laboratory certified by the State of California.
5) Chain of Custody Documents
6) All data submitted must be less than one (1) year old and on certifying laboratory's letterhead.
7) The source and matrix of the waste sample must be identified on report.
8) The analytical results must identify units of measure.

Sample collection and analyses:

Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be a representative sample; a representative sample is defined as a sample which can be expected to exhibit the average properties of the contaminated materials being tested.

It is the sole responsibility of the owner/generator to characterize the material as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill acceptability and will not assume responsibility for such characterization.

Required Analytical Data:

Predisposal testing requirements for soil	Analyses
	RCI (Reactivity, Corrosivity, Ignitability)
	TPH (Total Petroleum Hydrocarbon)
	*8240-TCLP (BTEX)
	8270-TCLP (Phenol)
	8080-TCLP(PCB'S)
	8260-(MTBE)
	Listed Metals

RCI analyses is used to determine whether or not a waste exhibits any hazardous characteristics as defined by 40 CFR parts 261.21, 261.22 and 261.23 and Title 22 CCR, article 11.

BTEX (Benzene, Toluene, Ethylbenzene and Xylene) analyses are required when characterizing petroleum contaminated soils.

*Soils contaminated with waste oils or other unknown hydrocarbons should be analyzed for Volatile Organic Compounds (VOC) Method 8240, 8270, 8080, 8260 and (STLC, TTLC) Listed Metals.

**Frequency of sampling may vary based on site specific information.

Acceptance Criteria:

One (1) composite of four samples for RCI (Reactivity, Corrosivity, Ignitability) analyses to represent the total cubic yards of material to be disposed.

	Central Landfill Acceptance Limit	**Reporting Limit**
Reactivity:		
Sulfide	<100 mg/kg	50 mg/kg
Cyanide	< 10 mg/kg	1 mg/kg
Corrosivity:		
pH range	5 to 10	
Ignitability:		
Flashpoint	>140 deg F or 60 deg C	100 deg F or 50 deg C

One (1) composite of four samples every 100 cubic yards maximum for TPH as gasoline, TPH as diesel, TPH as motor oil, BTEX (Benzene, Toluene, Ethylbenzene, Xylene), Organic Lead, MTBE, Phenol and Polychlorinated biphenyls (PCBs).

Substance	**Central Landfill Acceptance Limit**	**Reporting Limit**
TPH as gasoline	50 ppm (mg/kg)	2 ppm (mg/kg)
TPH as diesel	100 ppm (mg/kg)	10 ppm (mg/kg)
TPH as motor oil	100 ppm (mg/kg)	10 ppm (mg/kg)
Organic Lead	13 ppm (mg/kg)	5 ppm (mg/kg)
Phenol	5 ppm (mg/l)	0.5 ppm (mg/kg)
Polychlorinated biphenyls (PCBs)	5 ppm (mg/l)	0.5 ppm (mg/kg)
MTBE	ND(not detected)	0.005 ppm (mg/kg)
BTEX		
Benzene	0.01 ppm (mg/kg)	0.005 ppm (mg/kg)
Toluene	15 ppm (mg/kg)	0.010 ppm (mg/kg)
Ethylbenzene	15 ppm (mg/kg)	0.010 ppm (mg/kg)
Xylene	15 ppm (mg/kg)	0.010 ppm (mg/kg)

One (1) composite of four samples every 500 cubic yards maximum for the list of Metals.

Substance	Per Title 22 CCR (mg/l) STLC Limit	Per Title 22 CCR (mg/kg) TTLC Limit	Reporting Limit (mg/kg)	Method
Antimony	15	500	5	EPA 6010
Arsenic	5	500	2	EPA 7060
Barium	100	10,000	0.5	EPA 6010
Beryllium	0.75	75	0.1	EPA 6010
Cadmium	1	100	0.5	EPA 6010
Chromium (VI)	5	500	0.1	EPA 7196
Chromium (III)	560	2,500	1	EPA 6010
Cobalt	80	8,000	1	EPA 6010
Copper	25	2,500	1	EPA 6010
Lead	5	350	4	EPA 7421
Mercury	0.2	20	0.02	EPA 7471
Molybdenum	350	3,500	2	EPA 6010
Nickel	20	2,000	3	EPA 6010
Selenium	1	100	0.5	EPA 7740
Silver	5	500	1	EPA 6010
Thallium	7	700	5	EPA 6010
Vanadium	24	2,400	2	EPA 6010
Zinc	250	5,000	2	EPA 6010

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Susan R. Klassen
Division Manager
Engineering and Operations

APPLICATION TO DISPOSE OF SOIL

(revised March 1999)

I. Soil Generator:

Name, Co., Corp._____

Address_____City_____Zip_____

II. Soil Location:

Site Address_____City_____Zip_____

Assessors Parcel Number_____

III. Soil Disposition:

Quantity to be disposed:_____Cubic Yards.

wet____dry_____mixed_____stockpile_____drum_____In Situ_____other_____

_____

The County of Sonoma accepts uncontaminated soil at its landfill sites between May and September each year. Before any soil is disposed of, it must be tested for hazardous waste contamination as defined by RCRA and/or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 100 (revised March 1999) should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the soil by mail within about two (2) weeks.

I certify that all information submitted herewith is truly representative of the above described soil and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name

_____
Signature of Generator

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION
500 Mecham Road, Petaluma, CA 94952
Phone: (707)792-0547 Fax: (707)792-0416

REFUSE BULLETIN NO. 101 (REVISED: January 5, 1998)

PROCEDURE FOR DISPOSAL OF INFECTIOUS WASTES

BACKGROUND:

Current operational procedure (Bulletin No. 101 dated 2/92) for disposal of infectious wastes has proven to be ineffective in protecting disposal workers and the efficiency of the landfill operation.

PURPOSE:

It is the intent of the Sonoma County Department of Transportation and Public Works to establish a revised policy which will more effectively handle the disposal of infectious wastes on a regular and emergency basis.

LEGAL AUTHORITY:

27 CCR 20880 states that medical waste, unless treated and deemed to be solid waste, which is regulated pursuant to the "Medical Waste Management Act", Part 14, of Division 104 of the Health and Safety Code, shall not be accepted for disposal at a site. The Local Enforcement Agency is the Sonoma County Public Health Department.

PROCEDURE:

No untreated infectious waste shall be accepted at any Sonoma County Disposal Site.

No regulated sharps may be disposed of at any Sonoma County Disposal site.

No treated infectious waste will be accepted at any of the transfer stations in Sonoma County (Annapolis, Guerneville, Healdsburg, Occidental, and Sonoma).

Autoclaved infectious waste, (excluding regulated sharps), generated in Sonoma County will only be accepted at the Central Disposal site for disposal, subject to the following conditions:

1. Autoclaved Infectious waste shall only be accepted at the Central site between

8:00 a.m. and 2:00 p.m. Tuesday through Thursday.

2. Notification of planned delivery must be made 24 hours prior to disposal by contacting a Disposal Supervisor at (707) 792-0547.

3. In an emergency situation when autoclaved infectious waste must be disposed of outside of the days and hours allowed above and/or without 24 hours notice, written notification from the Local Health officer stating that an emergency situation does exist will be required prior to disposal. A special handling charge may be levied for this service for the cost of the labor of employees required to work during this time, pursuant to Section C.4. of the Refuse Disposal Fee Schedule. This charge is in addition to regular disposal fees.

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
REFUSE OPERATIONS HEADQUARTERS
500 MECHAM ROAD
PETALUMA, CA 94952
707-792-0547

- REFUSE BULLETIN NO. 110 -

DATE: October 26, 1989

TO: All Disposal Employees

FROM: Edward Hayes, Operations Manager EHH

SUBJECT: Asbestos Handling and Disposal

Currently the Sonoma County Central Disposal Site & Transfer Facilities are not accepting any waste material which is suspected of containing asbestos.

Although non-friable asbestos is considered non-hazardous (regardless of the asbestos content) and not subject to Title 22, Division 4, Chapter 30 the California Code of Regulations, it still remains subject to becoming friable and hazardous waste if allowed to be disposed of using current disposal methods at the Central Landfill.

If it should ever become necessary to provide disposal service for material containing asbestos, then a program will be developed to meet all requirements or restrictions, which may be imposed by the authority of the regulatory agencies involved with handling and disposal of asbestos.

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
REFUSE OPERATIONS HEADQUARTERS
500 MECHAM ROAD
PETALUMA, CA 94952
707-792-0547

- REFUSE BULLETIN NO. 112 -

DATE: November 13, 1990

TO: All Refuse Employees

FROM: Sergio Gonzalez, Safety Coordinator

SUBJECT: DRAINED OIL FILTERS

The Sonoma County Dept. of Public Works, Refuse Division will accept any oil filters generated by householders as non-hazardous waste if the filters have been drained of all free flowing oil or crushed to remove the residual oil.

This policy applies only to oil filters from passenger vehicles (any motor vehicle designed for carrying not more than 10 persons, including the driver) and used or maintained for the transportation of persons.

Reference: DOHS, The 20 Most Frequently Asked Questions (1990)

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
500 MECHAM ROAD
PETALUMA, CALIFORNIA 94952
Integrated Waste Management Division
Tel: (707) 792-0547 Fax: (707) 792-0416

Richard Doble
Operations Manager

Refuse Bulletin No. 114

(December 17, 1993)

LANDFILL PROCEDURE FOR DISPOSING OF SMALL ANIMALS

BACKGROUND:

Currently there is no operational procedure for disposing of small animals and sheep.

PURPOSE:

It is the intent of the Sonoma County Department of Public Works, Integrated Waste Management Division to set forth an operational procedure for processing and disposing of small animals and sheep.

PROCEDURE:

1. Only those animals that are not accepted at animal rendering plants will be accepted at the landfill. The Central Operations office should be contacted for direction on special handling.

2. Prior to acceptance animal must be double wrapped or bagged with a minimum of two layers of 4 mil plastic and bound so that no part of the animal is exposed. Bindings shall be sufficient to contain the animal within the wrappings during disposal.

3. Animals will be accepted and disposed of only in the commercial tipping area between 8:00 and 2:00 pm daily.

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION OPERATIONS
500 Mecham Road, Petaluma, California 94952
Telephone (707) 792-0547 Fax (707) 792-0416

MEMORANDUM

Richard W. Doble, P.E., P.L.S.
Operations Manager

Refuse Bulletin No. 115 (Revised 10/15/96)

DISPOSAL OF SOILS FROM RESIDENTIAL AREAS
Ten (10) cubic yards or less

The Sonoma County Central Landfill at 500 Mecham Road is permitted as a Class III landfill and will not accept waste which is defined as hazardous by RCRA and/or Title 22.

The Sonoma County Central Landfill will however accept non-hazardous petroleum contaminated soil which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

The County of Sonoma recognizes that sampling and testing to determine safe levels is expensive and time consuming, and therefore, has developed an alternative method for clearance of small quantities of soil from residential areas.

The following information is required prior to acceptance of any soil less than 10 cubic yards from a residential source:

1. A letter from the Sonoma County Environmental Health Department confirming there has been no hazardous waste spills reported on the property.

2. A completed "Application to Dispose of Soil" submitted by the owner/generator of the soil to be disposed of at the landfill.

All information should be mailed or delivered to the above address for processing; you will be notified by mail or fax if requested within one week of acceptance for disposal.

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE,PLS
Operations Manager

APPLICATION TO DISPOSE OF SOIL
10 cubic yards or less, Residential

I. Soil Generator:

Name, Co., Corp._____

Address _____ City_____ Zip_____

II. Soil Location:

Site Address _____ City_____Zip_____

Assessors Parcel Number _____

III. Soil Disposition:

Quantity to be disposed:_____ Cubic Yards.

wet__dry ___mixed___ stockpile__drum___ In Situ ____ other_____

_____

The County of Sonoma accepts uncontaminated soil at its landfill sites between May and September each year. Before any soil is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and/or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 115 should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the soil by mail within about one (1) weeks.

I certify that all information submitted herewith is truly representative of the above described soil and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including reasonable attorney's fees arising out of any violation or untruth of any of the information submitted;

_____

Printed Name:

_____

Signature of Generator

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Susan R. Klassen
Division Manager
Engineering and Operations

Refuse Bulletin No. 117 (8-14-97)

LANDFILL PROCEDURE FOR HANDLING AND DISPOSING OF DEWATERED SLUDGE

The Sonoma County Central Landfill located at 500 Mecham Road is permitted as class III landfill and will not accept waste which is defined as hazardous by RCRA and / or CCR Title 22.

The Sonoma County Central Landfill will however accept dewatered sludge that has been determined non-hazardous and which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentation of testing results, origin, location of sampling, licenses, permits and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any and all dewatered sludge from disposal at County Landfills without cause.

REQUIRED INFORMATION:

1. Amount of dewatered sludge to be disposed measured in tons.
2. Location where the sludge was generated.
3. Site address, name and address of the generator.
4. All laboratory results by a commercial laboratory, certified by the State of California.
5. Chain of custody documents.
6. All data submitted must be less than three (3) months old and on certifying laboratories' letterhead.
7. The source and matrix of the waste sample must be identified on report.
8. The analytical results must identify units of measure as shown in the acceptance limit.
9. A schedule for disposal.

Sample collection and analyses:

Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be a representative sample; a representative sample is defined as a sample which can be expected to exhibit the average properties of the materials being tested.

It is the sole responsibility of the owner/generator to characterize the waste as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill acceptability and will not assume responsibility for such characterization.

Below are the Sonoma County Central Landfill's Pre-disposal Testing Requirements for dewatered sludge. All tests should be performed on four-point composite samples.

1. One (1) analyses for the RCI (Reactivity, Corrosivity, Ignitability) to determine whether or not a waste exhibits any hazardous characteristics.

Substance		Recommended EPA Test Method
Reactivity:	STLC Reporting Limit	
Sulfide	10.00 mg/l	9030 or 376.1
Cyanide	0.20 mg/l	9010 or 335.2
Corrosivity:	Reporting Limit	
pH range	6 to 9.5	9045 or 150.1
Ignitability:	Reporting Limit	
Flashpoint	>140 deg F or 60 deg C	1010

2. One (1) analyses for the list of Inorganic Toxic Substances.

Substance	STLC Reporting Limit	Recommended EPA Test Method
Antimony	15.00 mg/l	6010 or 7040 or 7041
Arsenic	0.25 mg/l	6010 or 7060 or 7061
Barium	50.00 mg/l	6010 or 7080 or 7081
Beryllium	0.50 mg/l	6010 or 7090 or 7091
Cadmium	0.04 mg/l	6010 or 7130 or 7131
Chromium (VI)	1.71 mg/l	7198 or 7195 or 7196 or 7197
Chromium (III)	5.00 mg/l	6010 or 7190 or 7191
Cobalt	2.50 mg/l	6010 or 7200
Copper	0.20 mg/l	6010 or 7210 or 7211
Lead	0.30 mg/l	6010 or 7420 or 7421
Mercury	0.0003 mg/l	7470 or 7471
Molybdenum	0.50 mg/l	6010

Nickel	1.51 mg/l	6010 or 7520 or 7521
Selenium	2.70 mg/l	6010 or 7740 or 7741
Silver	2.50 mg/l	6010 or 7760 or 7761
Thallium	3.90 mg/l	6010 or 7840 or 7841
Vanadium	1.00 mg/l	6010 or 7910 or 7911
Zinc	1.63 mg/l	6010 or 7950 or 7951

3. One (1) analyses for the list of Organic Toxic Substances.

Substance	STLC or TCLP Reporting Limit	Recommended EPA Test Method
Aldrin	0.140 mg/l	8010
Benzene	0.010 mg/l	8260 or 8020 or 8024
2-Butanone (MEK)	3.000 mg/l	8260
Chlordane	0.250 mg/l	8080
Diesel (TPH)	0.150 mg/l	8080
Gas (TPH)	0.150 mg/l	8080
Motor Oil (TPH)	0.150 mg/l	8080
DDT, DDE, DDD	0.100 mg/l	8080
2,4-Dichlorophenoxyacetic acid	10.000 mg/l	8150 or 8250
Dieldrin	0.800 mg/l	8080
Dioxin (2,3,7,8-TCDD)	0.001 mg/l	8280
Endrin	0.020 mg/l	8080 or 8250
Ethylbenzene	0.450 mg/l	8260
Heptachlor	0.470 mg/l	8080 or 8250 or 8260
Kepone	2.100 mg/l	8080
Lindane	0.400 mg/l	8080 or 8250
Methoxychlor	10.000 mg/l	8080
Mirex	2.100 mg/l	8270
Phenol	0.075 mg/l	8270 or 8040 or 8250
Pentachlorophenol	1.700 mg/l	8270 or 8040 or 8250
Polychlorinated biphenyls (PCBs)	0.0075 mg/l	8080
Styrene	0.150 mg/l	8260
Tetrachloroethylene (PCE)	0.075 mg/l	8260 or 8240
Toluene	0.600 mg/l	8260 or 8020 or 8024
Toxaphene	0.500 mg/l	8080 or 8250
Trichloroethylene	0.075 mg/l	8260
2,4,5-Trichlorophenoxypropionic acid	1.000 mg/l	8150 or 8250
Vinyl Chloride	0.030 mg/l	8260 or 8010 or 8240
Xylene	0.300 mg/l	8260 or 8020 or 8240

4. One (1) testing of dewatered sludge solid percentage in accordance to Title 23 CCR section 2523.

Testing % Solid	Reporting Limit	Recommended EPA Test Method
Primary	at least 20% solid	EPA 160.3
Secondary	at least 15% solid	EPA 160.3

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

APPLICATION TO DISPOSE OF DEWATERED SLUDGE

I. Sludge Generator:
Name, Co., Corp._____
Address_____City_____Zip_____

II. Sludge Location:
Site Address_____City_____Zip_____
Assessors Parcel Number_____

III. Sludge Disposition:
Is this a one time request? If not, state frequency_____
Quantity to be disposed:_____CYs/Tons; Duration_____
% Solid_____Primary/Secondary/Others

IV. Process that generate sludge. Attach copies of permits, license State, Federal or County.
_____

V. Method of Hauling: List Federal, State or local permits obtained to transport sludge and attach a copy of each._____

The County of Sonoma accepts dewatered sludge at its landfill sites between March and October each year. Before any sludge is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and / or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 117 should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the sludge by mail within about two (2) weeks.

I certify that all information submitted herewith is truly representative of the above described sludge and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name:

_____
Signature of Generator

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE,PLS
Division Manager
Engineering and Operations

Refuse Bulletin No. 116 (12-6-96)

Landfill Procedure for Handling and Disposing of Special Waste

The Sonoma County Central Landfill at 500 Mecham Road is permitted as aClass III landfill and will not accept waste which is defined as hazardous by RCRA and / or CCR Title 22.

The Sonoma County Central Landfill will however accept non-hazardous special waste which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentation of testing results, origin, location of sampling and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any special waste from disposal at County Landfills without cause.

SUBMIT ONLY ITEM(S) BELOW WITH A CHECK MARK:

- ☐ Amount of special waste to be disposed measured in cubic yards.
- ☐ Plot plans with location of where samples were taken, location and disposition of special waste, eg; in situ, stocks pile, containers, others.
- ☐ Site address; owners name and address
- ☐ All laboratory results by a commercial laboratory certified by the State of California.
- ☐ Chain of Custody Documents
- ☐ All data submitted must be less than one (1) year old and on certifying laboratory's letterhead.
- ☐ The source and matrix of the special waste sample must be identified on report.
- ☐ The analytical results must identify units of measure.

Sample collection and analyses:

Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be a representative sample; a representative sample is

defined as a sample which can be expected to exhibit the average properties of the contaminated materials being tested.

It is the sole responsibility of the owner/generator to characterize the special waste as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill acceptability and will not assume responsibility for such characterization.

Below are the Sonoma County Central Landfill's Pre-disposal Testing Requirements for Special Waste.

SUBMIT ONLY ITEM(S) BELOW WITH A CHECK MARK:

☐ One (1) composite of four samples for RCI (Reactivity, Corrosivity, Ignitability) to represent the total cubic yards to be disposed.

	Acceptance Limit
Reactivity:	
Sulfide	<100mg/kg
Cyanide	<10 mg/kg
Corrosivity:	
pH range	5 to 10
Ignitability:	
Flashpoint	>140 deg F or 60 deg C

☐ One (1) composite of four samples every 100 cubic yards maximum for TPH as gasoline, TPH as diesel, TPH as motor oil, BTEX (Benzene, Toluene, Ethylbenzene, Xylene), Organic Lead, Phenol, Oil and Grease.

	Acceptance Limit
☐TPH as gasoline	50 ppm (mg/kg)
☐TPH as diesel	100 ppm (mg/kg)
☐TPH as motor oil	100 ppm (mg/kg)
☐Oil and Grease	100 ppm (mg/kg)
☐Organic Lead	13 ppm (mg/kg)
☐Phenol	0.01 ppm (mg/kg)
☐BTEX	
Benzene	0.01 ppm (mg/kg)
Toluene	15 ppm (mg/kg)
Ethylbenzene	15 ppm (mg/kg)
Xylene	15 ppm (mg/kg)

☐ One (1) composite of four samples every 500 cubic yards maximum for the list of Inorganic Toxic Substances per Title 22 California Code of Regulations.

Substance	STLC Acceptance Limit	TTLC Acceptance Limit
Antimony	15 mg/l	500 mg/kg
Arsenic	5 mg/l	500 mg/kg
Asbestos		10,000 mg/kg
Barium	100 mg/l	10,000 mg/kg

Beryllium	0.75 mg/l	75 mg/kg
Cadmium	1 mg/l	100 mg/kg
Chromium (VI)	5 mg/l	500 mg/kg
Chromium (III)	560 mg/l	2,500 mg/kg
Cobalt	80 mg/l	8,000 mg/kg
Copper	25 mg/l	2,500 mg/kg
Fluoride salts	180 mg/l	18,000 mg/kg
Lead	5 mg/l	1,000 mg/kg
Mercury	0.2 mg/l	20 mg/kg
Molybdenum	350 mg/l	3,500 mg/kg
Nickel	20 mg/l	2,000 mg/kg
Selenium	1 mg/l	100 mg/kg
Silver	5 mg/l	500 mg/kg
Thallium	7 mg/l	700 mg/kg
Vanadium	24 mg/l	2,400 mg/kg
Zinc	250 mg/l	5,000 mg/kg

☐ One (1) composite of four samples every 500 cubic yards maximum for the list of Organic Toxic Substances per Title 22 California Code of Regulations.

Substance	STLC Acceptance Limit	TTLC Acceptance Limit
Aldrin	0.14 mg/l	1.4 mg/kg
Chlordan	0.25 mg/l	2.5 mg/kg
DDT, DDE, DDD	0.1 mg/l	1.0 mg/kg
2,4-Dichlorophenoxyacetic acid	10 mg/l	100 mg/kg
Dieldrin	0.8 mg/l	8.0 mg/kg
Dioxin (2,3,7,8-TCDD)	0.001 mg/l	0.01 mg/kg
Endrin	0.02 mg/l	0.2 mg/kg
Heptachlor	0.47 mg/l	4.7 mg/kg
Kepone	2.1 mg/l	21 mg/kg
Lead compounds		13 mg/kg
Lindane	0.4 mg/l	4.0 mg/kg
Methoxychlor	10 mg/l	100 mg/kg
Mirex	2.1 mg/l	21 mg/kg
Pentachlorophenol	1.7 mg/l	17 mg/kg
Polychlorinated biphenyls (PCBs)	5.0 mg/l	50 mg/kg
Toxaphene	0.5 mg/l	5 mg/kg
Trichloroethylene	204 mg/l	2,040 mg/kg
2,4,5-Trichlorophenoxypropionic acid	1.0 mg/l	10 mg/kg

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE, PLS
Division Manager
Engineering and Operations

APPLICATION TO DISPOSE OF SPECIAL WASTE

I. Special Waste Generator:
Name, Co., Corp._____
Address_____City_____Zip_____

II. Special Waste Location:
Site Address_____City_____Zip_____
Assessors Parcel Number

III. Special Waste Disposition:
Quantity to be disposed_____Cubic Yards.
wet____dry_____mixed_____stockpile_____ drum_____ other_____
_____

The County of Sonoma accepts special waste requiring special handling at its landfill sites. Before any special waste is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and / or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 116 should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the special waste and what special handling is required.

I certify that all information submitted herewith is truly representative of the above described special waste and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name

_____
Signature of Generator

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
INTEGRATED WASTE DIVISION OPERATIONS
500 MECHAM ROAD, PETALUMA, CA 94952
TELEPHONE 707 792-0547; FAX 707 792-0416

REFUSE BULLETIN NO. 111
(Revised August 10, 1999)

ABANDONMENT OF MATERIAL SUSPECTED OF BEING A HAZARD

When suspicious (potentially hazardous) wastes considered to be abandoned are encountered on site, the following procedure is in effect.

1. Call the Disposal Supervisor.

2. Secure the area and keep County employees and public away from any suspicious spill until the Disposal Supervisor arrives.

3. The Disposal Supervisor will be the temporary incident commander if the material is non-toxic, non-caustic or does not pose a health threat to the public, the employees or the environment. The Refuse Division will be responsible for the clean up.

4. As determined by the incident commander (Disposal Supervisor), if the material is found to be potentially toxic or caustic, the Disposal Supervisor will call the proper agencies for clean up.

APPENDIX B-6

Report of Compost Site Information

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES
Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

March 22, 1996

Mr. Ken Wells
Department of Transportation and Public Works
Integrated Waste Management Division
575 Administration Drive, Room 117A
Santa Rosa, CA. 95403

Re: Central Compost Site, 49-AA-0260

Dear Ken:

The California Integrated Waste Management Board has concurred with the issuance of a Standardized Composting Permit No. 49-AA-0260 for the Central Compost Site. Enclosed is a copy of Permit Decision No. 96-84, dated February 28, 1996, a Notice of Determination posted March 21, 1996 and the permit issued March 21, 1996.

Sincerely,

ROBERT A. SWIFT, R.E.H.S.
Senior Solid Waste Specialist

RAS/mb

RECEIVED
1996 MAR 26 A 10: 12
SONOMA COUNTY DEPT.
OF PUBLIC WORKS.

DEPARTMENT OF HEALTH SERVICES

Mark A. Kostielney - Director

Environmental Health Division

Jonathan J. Krug - Director

This notice was posted on MAR 21 1996

and will remain posted for a period of thirty days until 04/20/1996.

NOTICE OF DETERMINATION FOR RESPONSIBLE AGENCY

This Notice of Determination, prepared pursuant to Section 15096 of the State CEQA guidelines, indicates the action taken by the Sonoma County Department of Health Services on the project described below.

Project Title: Issuance of standardized permit for Central Disposal Site Compost Facility
Project Location/Address/APN: 500 Meacham Road, Petaluma
Lead Agency: County of Sonoma
Responsible Agency: Sonoma County Department of Health Services
Decision Making Body: Sonoma County Department of Health Services, Local Enforcement Agency
Date of Approval: March 21, 1996
Project Applicant: Sonoma County Department of Transportation and Public Works
State Clearinghouse Number: 92013077

Project Description: The Sonoma County Department of Health Services will issue a standardized permit for continued operation of an existing compost facility located at the Sonoma County Central Disposal Site. The County of Sonoma, as Lead Agency, adopted a Negative Declaration for this facility in 1992 and constructed the facility in 1993.

This is to advise that the Sonoma County Department of Health Services, as a Responsible Agency under CEQA, has determined to issue a standardized permit for the compost facility, and has made the following determinations:

1. The County of Sonoma, as Lead Agency, prepared a Negative Declaration for the compost facility.
2. The Sonoma County Department of Health Services, acting under the authority of the State of California as the Local Enforcement Agency and a Responsible Agency under CEQA, considered the Negative Declaration prepared by the County of Sonoma.
3. The project was found to have no significant effect on the environment.
4. The Sonoma County Department of Health Services added minor technical information to the Negative Declaration. This information did not constitute important new information that would require new environmental analysis, and did not change any conclusions reached in the original Negative Declaration.
5. Mitigation measures were not made a condition of the approval of the project.

0 Center Drive, Suite A, Santa Rosa, CA 95403-2067 • *phone* (707) 525-6565 • *fax* (707) 525-6525

California Integrated Waste Management Board
Permit Decision No. 96-84
February 27, 1996

WHEREAS, Sonoma County Department of Transportation and Public Works proposes to operate a green waste composting facility on 35 acres (25 acres for the composting area and 10 acres for the processing area) of intermediate cover area of the Central Disposal Site under a Standardized Permit; and

WHEREAS, Sonoma County Public Works Department (County), the lead agency, prepared a Negative Declaration (ND), SCH #9201377, for the proposed project. The document was approved by the lead agency on March 24, 1992, and a Notice of Determination was filed on May 11, 1992; and

WHEREAS, the LEA, in consultation with Board Staff, prepared and submitted an addendum to the ND on January 30, 1996; and

WHEREAS, Board staff reviewed the ND, response to comments, and addendum for the proposed project, and determined that the CEQA document is adequate for the Board's evaluation of the proposed project for those project activities which are within this Agency's expertise and/or powers or which required to be carried out or approved by the Board; and

WHEREAS, the design capacity is 36,000 cubic yards of active compost on-site at any one time; and

WHEREAS, Sonoma County Department of Health Services, acting as the Local Enforcement Agency, has submitted to the Board for its review and concurrence in, or objection to, a new Standardized Permit for the Central Compost Site; and

WHEREAS, the proposed permit is consistent with the project description in the CEQA document; and

WHEREAS, the Board finds that all state and local requirements for the proposed permit have been met, including consistency with Board standards, conformance with the County Integrated Waste Management Plan, and compliance with CEQA; and

WHEREAS, LEA and Board staff have evaluated the application and proposed permit and determined that the facility will be able to operate in compliance with the applicable State Minimum Standards and standardized permit terms and conditions.

NOW, THEREFORE, BE IT RESOLVED that the California Integrated Waste Management Board concurs in the issuance of Solid Waste Facility Permit No. 49-AA-0260.

CERTIFICATION

The undersigned Executive Director of the California Integrated Waste Management Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the California Integrated Waste Management Board held on February 27, 1996.

Dated: FEB 28 1996

Ralph E. Chandler
Executive Director

State of California
CIWMB FORM 5000 (revised 2/95)

California Integrated Waste Management Board

STANDARDIZED COMPOSTING PERMIT

1. Facility/Permit Number (SWIS): 49-AA-0260

2. Name of Facility:	Address/Location:
Central Compost Site	500 Mecham Road Petaluma, CA 94952

3. Local Enforcement Agency:	Address:
Sonoma County Department of Health Services: Environmental Health Division	1030 Center Dr., Suite A Santa Rosa, CA 95403

4. Signature of Local Enforcement Agency Approving Officer:	6. Date of Signature:
5. Please Print or Type Name and Title of Approving Officer: Robert A. Swift, Senior Solid Waste Specialist	1/25/96

7. Date Received by CIWMB: JAN 25 1996

8. Signature of CIWMB Approving Officer: Dorothy Rice	10. Date of Signature:
9. Please Print or Type Name and Title of Approving Officer: Dorothy Rice, Chief Deputy	3-7-96

11. Date of Permit Issuance: 3/21/96	12. Permit Review Due Date: 3/21/2001

The facility for which this permit has been issued shall only be operated in accordance with the description provided in the application pursuant to Section 18105.1 and Report of Composting Site Information pursuant to Section 17863.

13. Legal Description of Facility: (description may be attached)

Legal description attached

14. Findings:

a. This permit is consistent with standards adopted by the California Integrated Waste Management Board pursuant to Public Resources Code Section 44010.

b. [ ] An environmental determination (i.e., Notice of Determination), has been filed with the State Clearing House (# 92013077) for all facilities that are not exempt from CEQA and documents pursuant to Public Resources Code Section 21081.6.

c. [ ] The following authorized agent Sonoma County Permits and Resource Management has made the determination that the facility is consistent with the applicable general plan, as required by Public Resources Code, Section 50000.5(a).

d. [ ] The operation of this facility is consistent with the [ ] County Solid Waste Management Plan (50000), or the [X] County Integrated Waste Management Plan (50001).

e. The design of the proposed facility or the design and operation of an existing facility, as appropriate, is in compliance with State Minimum Standards for Composting Operations Regulatory Requirements, Title 14, Division 7, Chapter 3.1 (commencing with Section 17850) of the California Code of Regulations.

f. Public Resources Code Section 44009 has been complied with.

15. In addition to this permit, the facility may have one or more of the following permits or restrictions on its operations. Persons seeking information regarding these items should contact the appropriate regulatory agency.

Report of Composting Site Information (January 1996)
State Water Resources Control Board/Regional Water Quality Control Board Waste Discharge
Requirements or Waiver Monitoring and Reporting Program No 93-77 (July 13, 1993)
National Pollutant Discharge Elimination System (Stormwater) Permit
Fire Protection District Findings (August 13, 1991)
Mitigation and Monitoring Measures (pursuant to the California Environmental Quality Act)
Conditional Use Permit Sonoma County Dept. of Planning (September 16, 1991)
California Environmental Quality Act Environmental Impact Report or Negative Declaration SCH #92013077 (January, 1992)
Air Pollution Permits and Variances #9341 (January 7, 1994)
Coastal Commission Restrictions

a. The operator shall comply with applicable state minimum standards set forth in Title 14, Division 7, Chapter 3.1 (commencing with Section 17850) of the California Code of Regulations.

b. The operator shall comply with all mitigation and monitoring measures developed in accordance with a certified environmental document filed pursuant to Public Resources Code Section 21081.6.

c. The operator shall maintain a copy of this standardized permit at the facility to be available at all times to facility, enforcement agency, or board personnel.

d. The operator shall maintain and make available for inspection by the enforcement agency and board all correspondence and reports provided to other regulatory agencies that have jurisdiction over the facility.

e. The operator shall be responsible for identifying the types of feedstocks accepted for processing.

f. The design capacity of 36,000 cubic-yards of material undergoing the composting process shall not be exceeded. This requirement does not include on-site storage of feedstock or stabilized compost.

g. Additional clarifying information concerning the design and operation of the composting facility shall be furnished upon written request of the enforcement agency, or the board.

h. The operator shall notify the enforcement agency, in writing, within thirty (30) days of receipt of the test results, of any noncompliance with Sections 17868.2 and 17868.3 of Chapter 3.1, Division 7, Title 14, of the California Code of Regulations.

i. Unless specifically permitted or allowed under Title 14, Division 7, Chapter 3.1 of the California Code of Regulations, the facility shall not accept the following materials:

(1) Designated wastes as defined in Title 23, Chapter 15, Section 2522 of the California Code of Regulations

(2) Hot Ashes/Burning materials

(3) Medical wastes as defined in Section 25023.2 of the Health & Safety Code

(4) Hazardous Wastes as defined in Section 25117 of the Health & Safety Code

(5) Liquid Wastes as defined in Title 23, Chapter 15, Section 2601 of the California Code of Regulations (unless approved by RWQCB and the enforcement agency)

j. The following activities are prohibited:

(1) Scavenging

(2) Salvaging

(3) Discharge of wastes off-site

(4) Vector propagation or harborage

k. The facility, if located outside of a city, shall be maintained in compliance with the flammable clearance provisions, pursuant to Public Resources Code Section 44151.

SEE INSTRUCTIONS ON BACK.

ILITY NAME CENTRAL COMPOST SITE	FACILITY PHONE NUMBER (707) 792-0547
ILITY ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE) 50[illegible]ECHAM ROAD, PETALUMA, CA 94952	
ILITY OPERATOR'S NAME ONOMA COUNTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS	OPERATOR'S PHONE NUMBER (707)-792-0547
ERATOR'S ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE) 75 ADMINISTRATION DRIVE ROOM 117A SANTA ROSA, CA 95403	
D OWNER'S NAME (IF DIFFERENT FROM OPERATOR) ONOMA COUTY DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS	LAND OWNER'S PHONE NUMBER (707)-527-2231
D OWNER'S ADDRESS (INCLUDE STREET, P.O. BOX, CITY, STATE, ZIP CODE) 75 ADMINISTRATION DRIVE, ROOM 117A, SANTA ROSA, CA 95403	

FACILITY INFORMATION

FORNIA CODE OF REGULATIONS SECTION NUMBER AUTHORIZING ELIGIBILITY:

E OF WASTE MATERIAL(S) HANDLED (PLEASE BE SPECIFIC): green waste, wood waste, agricultural waste, grape pomace, liquid winery by-products, creamery liquid

ME OF WASTE MATERIAL(S) HANDLED:

2,000 tons CAPACITY: 36,000 CUBIC YARDS	DAILY PEAK LOADING: 300tpd 900 CUBIC YARDS	71,800 tpy ANNUAL LOADING: 215,400 CUBIC YARDS

AND HOURS OF OPERATION:
days per week 7:00 a.m. to 4:00 p.m.

25 compost/10 process ITY 35 ACRES	25 compost/10 process OPERATING AREA SIZE: 35 ACRES
MING WASTE MATERIAL (NUMBER OF VEHICLES PER DAY): 150	OUTGOING WASTE MATERIAL (NUMBER OF VEHICLES PER DAY): 40

OF THE FOLLOWING STATEMENTS MUST BE CHECKED:

Issuance of the permit will not prevent or substantially impair achievement of the diversion goals of the jurisdiction from which it received solid waste; the facility is identified and described in or conforms with the county solid management waste plan, or otherwise complies with Public Resources Code 50000; The facility is consistent with the city or county general plan and is compatible with surrounding land uses, or otherwise complies with Public Resources Code 50000.1.

X The facility is identified in either the countywide siting element, the nondisposal facility element, or in the source reduction and recycling element for the jurisdictions in which it is located; or, that the facility is not required to be identified in any of these elements pursuant to section 50001 of the public resources code.

APPLICATION MUST BE ACCOMPANIED BY A
PORT OF FACILITY INFORMATION, ☒ SITE PLAN, ☒ LOCATION MAP, AND EITHER ☒ EVIDENCE OF COMPLIANCE WITH CEQA, OR ☐ INFORMATION ON THE STATUS OF CEQA

CERTIFICATION

eby acknowledge that I have read this application, and certify under penalty of perjury that the information provided is true and accurate. In ting the facility, I agree to comply with the conditions of the permit, and with federal, state and local requirements and enactments.

OWNER'S SIGNATURE E. Wallace	DATE SIGNED 1/25/96
TOR'S SIGNATURE [signature]	DATE SIGNED 1/25/96

ENCY NAME AND ADDRESS
SONOMA COUNTY DEPARTMENT OF HEALTH SERVICES 1030 CENTER DRIVE, SANTA ROSA 9540

FOR ENFORCEMENT AGENCY USE ONLY

ECEIVED:	DATE APPROVED:	DATE REJECTED:		

Instructions for Completing Standardized Application:

Fill out this application form completely and accurately in duplicate. After the Enforcement Agency (EA) has reviewed application, the EA will determine whether the application meets the requirements of section 18105.1. If the EA finds the application is complete and correct, it shall be accepted for filing. If the application is not found to be complete and correct it will be returned. For additional information on the procedure used for processing this application refer to Title 14 of the California Code of Regulations, Section 18105.2 et.seq..

Facility Name: The legal name of the facility.

Facility Address/Location: The address of the facility and a description of the location if different.

Facility Operator/Land Owner: Provide both the mailing address and the location/address where process may be served.

Section Authorizing Eligibility: You must determine the appropriate Section of the Regulations that authorize eligibility. After determining the appropriate section list it on the application.

Type of Waste Material(s) Handled: Indicate the materials handled at the facility.

Site Capacity: Total capacity of material that can be stored at this site.

Daily Peak Loading: Is the largest project projected waste/material quantity to be received by an operation on any day of operation.

Annual Loading: Is the maximum amount of waste/material to be handled by an operation annually.

Traffic: State the maximum number of vehicles that will enter and haul incoming material or remove compost on a dai.

The operator is required to supply conformance finding information. Which ever of the two sections is appropriate to your operation must be checked. To make the determination you can contact the Enforcement Agency, Local Task Force, or othe solid waste planning agency in your city or county.

The application must include a site map and a location map. The site map should include, but not be limited to, operations areas and their relationships to property boundaries, adjacent land uses, proposed drainage systems, any excavation areas, and any other portions of the site dedicated to a specific use. The location map should show the general location of the operation at a scale size minimally equivalent to 1:24000 USGS topographical quadrangle.

A Report of Facility Information (RFI) must be included with this application. The RFI must contain all of the information required by the applicable section(s) of Article 3.2, Chapter 5, of 14CCR.

The application must include one of the following: (1) Evidence that there has been compliance with the California Environmental Quality Act, or (2) Information on the status of the application's compliance with the California Environmental Quality Act regarding this facility. Once there has been compliance with the California Environmental Act, evidence shall be submitted to the enforcement agency.

This application must be signed, under penalty of perjury, by both the land owner and the operator.

TATE OF CALIFORNIA

CALIFORNIA WASTE MANAGEMENT BOARD

OLID WASTE FACILITIES PERMIT APPLICATION

VMB E-1-77 (REV. 6/92)

NFORCEMENT AGENCY:

S. MA COUNTY DEPT OF HEALTH SERVICES

Sonoma County

FOR ENFORCEMENT AGENCY USE ONLY

FILE NUMBER (PERMIT NUMBER)

DATE RECEIVED:
DATE ACCEPTED:
DATE REJECTED:
FILING FEE:
RECEIPT NUMBER:
CO SWMP/ COUNTYWIDE IWMP REFERENCE PAGE(S):

PE OF APPLICATION:

- [ ] 1. NEW SOLID WASTE FACILITY PERMIT
- [ ] 2. REVISION OF PERMIT
- [ ] 3. PERMIT REVIEW
- [ ] 4. MODIFICATION OF PERMIT
- [ ] 5. EXEMPTION FROM PERMIT
- [ ] 6. FACILITY CLOSURE
- [ ] 7. AMENDMENT OF APPLICATION

OTE: This form has been developed for multiple uses. It is the transmittal sheet for documents required to be submitted to the cal enforcement agency. See instructions for completing this application.

GENERAL SCRIPTION CILITY

NAME OF FACILITY: Central Compost Site

LOCATION OF FACILITY: (Give address or location, also include legal description by section, township, range, base, and meridian if surveyed or projected. 500 Mecham Road, Petaluma, CA 94952

TYPE OF FACILITY:

- [ ] LANDFILL
- [ ] SUMP
- [ ] TRANSFORMATION FACILITY
- [ ] PROCESSING FACILITY
- [ ] TRANSFER STATION
- [x] COMPOSTING Green Waste (MIXED WASTES)
- [ ] MATERIAL RECOVERY FACILITY
- [ ] LAND SPREADING

TYPE OF WASTES TO BE RECEIVED:

- [x] AGRICULTURAL
- [ ] ASBESTOS
- [x] ASH
- [ ] AUTO SHREDDER
- [ ] CONSTRUCTION/DEMOLITION
- [ ] DEAD ANIMALS
- [ ] INDUSTRIAL
- [x] LIQUIDS (INCLUDES SEPTAGE)
- [ ] MIXED MUNICIPAL
- [ ] SLUDGE
- [ ] TIRES
- [ ] WOOD MILL
- [ ] OTHER DESIGNATED WASTE
- [ ] OTHER HAZARDOUS WASTE
- [x] OTHER: (DESCRIBE) residential yardwaste

C N

- [x] COMMENCED Date:
- [ ] WILL COMMENCE Date:

PROPOSED CHANGE (CHECK APPLICABLE BOXES)

- [x] DESIGN expansion
- [ ] NO CHANGE
- [ ] OPERATION

EFFECTIVE DATE OF PROPOSED CHANGE: 10/95

ERAGE ANNUAL ADING(TPY 71.8k

PEAK DAILY LOADING(TPD): 300

FACILITY SIZE (A): 25

SITE CAPACITY IN YARDS:

EXPECTED CLOSURE DATE:

OPERATOR ORMATION land disposal, perator is erent from owner, attach e or franchise eement.

OWNER OF LAND (Name): Sonoma County	ADDRESS: 575 Administration Dr Rm 117A Santa Rosa California 95403	TELEPHONE NUMBER: (707) 527-2231
FACILITY OPERATOR (Name): Sonoma County	ADDRESS: 575 Administration Dr. Rm 117A Santa Rosa CA 95403	(707) 527-2231
ADDRESS WHERE LEGAL NOTICE MAY BE SERVED: 575 Administration Dr , Rm 117A Santa Rosa, CA 95403		TELEPHONE NUMBER: (707) 527-2231

reby acknowledge that I have read this application and the Report of Facility Information, and certify that the information given is e and accurate to the best of my knowledge and belief. In operating the solid waste facility, I agree to comply with the conditions he permit and with federal, state, and local enactments.

NATURE (LAND OWNER OR AGENT): [signature]

SIGNATURE (FACILITY OPERATOR OR AGENT): [signature]

ED NAME: Ken Wells

TYPED NAME: Richard Doble [signature]

E: Integrated Waste Manager DATE: 8/31/95

TITLE: Engr. & Field Operations Manager DATE: 8/31/95

IST OF ATTACHMENTS (CHECK IF APPLICABLE):

- [x] REPORT OF FACILITY INFORMATION
- [ ] PERIODIC SITE REVIEW
- [ ] LOCAL USE/PLANNING PERMITS
- [ ] OPERATING LIABILITY FINANCIAL MECHANISM
- [ ] DEPARTMENT OF HEALTH SERVICES PERMIT
- [x] AIR QUALITY/ POLLUTION CONTROL DISTRICT PERMITS
- [x] CERTIFIED ENVIRONMENTAL REVIEW REPORTS (CEQA)
- [ ] SWAT (AIR AND WATER)
- [x] STORMWATER DISCHARGE PERMITS (NPDES)
- [ ] WETLANDS PERMIT
- [ ] PRELIMINARY CLOSURE/POSTCLOSURE MAINTENANCE PLAN
- [ ] FINAL CLOSURE/POSTCLOSURE MAINENANCE PLAN
- [ ] FINANCIAL RESPONSIBILITY DOCUMENTATION
- [ ] OTHER REGULATORY AGENCY PERMITS

INSTRUCTIONS FOR COMPLETING THE APPLICATION

This application form is for a Solid Waste Facilities Permit to receive, store, process, transform, or dispose of solid waste regulated by the Calif Waste Management Board (Board). This form and the filing fee should be sent to the appropriate city or county Local Enforcement Agency (LE The exact amount of the filing fee is determined by the LEA.

Complete this form and return it with a photocopy and two copies of the appropriate attachments determined to be necessary by your LEA. All material should be submitted on 81/2" x 11" paper. Maps and other oversize documents should be folded to that size.

The effective date of the application is the date when all required information and the correct fee are received by the LEA. The LEA will notify you of this effective date.

If you have any questions on the completion of this form, please contact the LEA or Board staff for assistance at (916) 255-2200.

No instructions will be listed for items that are self-explanatory.

I. GENERAL DESCRIPTION OF FACILITY

TYPE OF WASTE TO BE RECEIVED:

agricultural - wastes resulting from the production and processing of farm or agricultural products, including manures, prunings, and crop residues.

asbestos - a naturally occurring family of carcinogenic fibrous mineral substance. The State Department of Health Services has classified friable wastes which contain more than one percent asbestos by weight as hazardous wastes. Friable means that the material can be crumbled with pressure and, therefore, is likely to emit fibers.

ash - the residue from the incineration of solid wastes, including municipal waste, infectious waste, woodwaste, sludge, and agricultural waste.

auto shredder - the "fluff" consisting of upholstry, paint, plastics, and other non-metallic substances which remains after the shredding of automobiles, discarded household major appliances, and sheetmetal. The State Department of Health Services has classified untreated shredder wastes as hazardous.

construction/demolition waste - waste building materials, packaging, and rubble resulting from construction, remodeling, repair and demolition operations, and consisting mainly of inert materials.

dead animals - animal carcasses requiring disposal that have not been previously used for medical purposes or with known infectious diseases.

industrial - solid or semi-solid wastes resulting from industrial processes and manufacturing operations, e.g. cement kiln dust, ore process residues. grit or screenings removed from a waste water treatment facility, etc.

tires - discarded tire casings.

liquids - wastes which are not spadeable, usually containing less than 50% solids. These wastes include cannery and food processing wastes, landfill leachate and gas condensate, boiler blowdown water, grease trap plumbings, oil and geothermal field wastes, septic tank pumpings, rendering plant byproducts, some sewage sludge, etc. may be hazardous.

mixed municipal - residential and commercial refuse, garbage and/or rubbish. Residential waste is commonly thought of as household garbag commercial wastes contain less putrecible waste and more paper and cardboard.

sewage sludge - human (not industrial) residue, excluding grit or screenings, removed from a waste water treatment facility or septic tank, whether in a dry or semidry form.

wood mill - shavings, sawdust, sanderdust, chips, bark, slabs, deck scrapings, edging wood and other flammable waste material incidental to the processing of wood products.

other - classification of exempted solid waste facility, or any allowable wastes not included in the above.

II. FACILITY INFORMATION

PROPOSED CHANGE IN DESIGN OR OPERATION, OR NO CHANGE; EFFECTIVE DATE:

For existing permitted facilities, when the operator proposes changes in design, operation, operator, or owner, details of the changes must be seen to by the LEA. If significant, the permit must be revised prior to implementation of the change. For an application for permit review, if there are no changes, so indicate.

AVERAGE ANNUAL LOADING (TPY)

The average amount of wastes the facility will receive on a yearly basis over the next five years, expressed in tons. Must be consistent with the RFI and any California Environmental Quality Act (CEQA) requirements. Volume figures should be converted to tons and the conversion factor should be documented in the accompanying Report of Facility Information.

PEAK DAILY LOADING (TPD)

The maximum amount of waste the facility is designed to receive, store, process, or dispose of per day, expressed in tons.

FACILITY SIZE:

The area of the facility in acres to be used for receiving, storing, processing, or disposing of wastes, including all monitoring locations and any buffer zone. This will be referred to as the "permitted acreage" and is considered the facility boundaries.

III. OPERATOR INFORMATION:

For land disposal operations, if the operator is different from land owner, attach lease or franchise agreement documenting operator's interest in real property.

SOLID WASTE FACILITIES PERMIT APPLICATION

CWMB E-1-77 (REV. 6/92) superceded 1/96

ENFORCEMENT AGENCY:

SONOMA COUNTY DEPT OF HEALTH SERVICES

COUNTY: Sonoma County

TYPE OF APPLICATION:

- [X] 1. NEW SOLID WASTE FACILITY PERMIT
- [ ] 2. REVISION OF PERMIT
- [ ] 3. PERMIT REVIEW
- [ ] 4. MODIFICATION OF PERMIT
- [ ] 5. EXEMPTION FROM PERMIT
- [ ] 6. FACILITY CLOSURE
- [ ] 7. AMENDMENT OF APPLICATION

FOR ENFORCEMENT AGENCY USE ONLY

FILE NUMBER (PERMIT NUMBER)

DATE RECEIVED:
DATE ACCEPTED:
DATE REJECTED:
FILING FEE:
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CO SWMP/ COUNTYWIDE IWMP REFERENCE PAGE(S):

NOTE: This form has been developed for multiple uses. It is the transmittal sheet for documents required to be submitted to the local enforcement agency. See instructions for completing this application.

I. GENERAL DESCRIPTION OF FACILITY

NAME OF FACILITY: Central Compost Site

LOCATION OF FACILITY: (Give address or location, also include legal description by section, township, range, base, and meridian if surveyed or projected. 500 Mecham Road, Petaluma, CA 94952

TYPE OF FACILITY:

- [ ] LANDFILL
- [ ] SUMP
- [ ] TRANSFORMATION FACILITY
- [ ] PROCESSING FACILITY
- [ ] TRANSFER STATION
- [X] COMPOSTING Green Waste (MIXED WASTES)
- [ ] MATERIAL RECOVERY FACILITY
- [ ] LAND SPREADING

TYPE OF WASTES TO BE RECEIVED:

- [X] AGRICULTURAL
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- [ ] CONSTRUCTION/DEMOLITION
- [ ] DEAD ANIMALS
- [ ] INDUSTRIAL
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- [ ] SLUDGE
- [ ] TIRES
- [ ] WOOD MILL
- [ ] OTHER DESIGNATED WASTE
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- [X] OTHER: (DESCRIBE) residential yardwaste

II. FACILITY DESCRIPTION

- [X] COMMENCED Date:
- [ ] WILL COMMENCE Date:

PROPOSED CHANGE (CHECK APPLICABLE BOXES)

- [X] DESIGN expansion
- [ ] NO CHANGE
- [ ] OPERATION

EFFECTIVE DATE OF PROPOSED CHANGE: 10/95

AVERAGE ANNUAL LOADING(TPY): 74.6

PEAK DAILY LOADING(TPD): 300

FACILITY SIZE (A): 24

SITE CAPACITY IN YARDS:

EXPECTED CLOSURE DATE:

III. OPERATOR INFORMATION

For land disposal, if operator is different from land owner, attach lease or franchise agreement.

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ADDRESS: 575 Administration Dr. Rm 117A Santa Rosa California 95403
TELEPHONE NUMBER: (707) 527-2231

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TELEPHONE NUMBER: (707) 527-2231

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I hereby acknowledge that I have read this application and the Report of Facility Information, and certify that the information given is true and accurate to the best of my knowledge and belief. In operating the solid waste facility, I agree to comply with the conditions of the permit and with federal, state, and local enactments.

SIGNATURE (LAND OWNER OR AGENT): Ken Wells

TYPED NAME: Ken Wells

TITLE: Integrated Waste Manager DATE: 8/31/95

SIGNATURE (FACILITY OPERATOR OR AGENT): Ken Doble

TYPED NAME: Richard Doble

TITLE: Engr. & Field Operations Manager DATE: 8/31/95

V. LIST OF ATTACHMENTS (CHECK IF APPLICABLE):

- [X] REPORT OF FACILITY INFORMATION
- [ ] PERIODIC SITE REVIEW
- [ ] LOCAL USE/PLANNING PERMITS
- [ ] OPERATING LIABILITY FINANCIAL MECHANISM
- [ ] DEPARTMENT OF HEALTH SERVICES PERMIT
- [X] AIR QUALITY/ POLLUTION CONTROL DISTRICT PERMITS
- [X] CERTIFIED ENVIRONMENTAL REVIEW REPORTS (CEQA)
- [X] WASTE DISCHARGE REQUIREMENTS
- [ ] SWAT (AIR AND WATER)
- [X] STORMWATER DISCHARGE PERMITS (NPDES)
- [ ] WETLANDS PERMIT
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ash - the residue from the incineration of solid wastes, including municipal waste, infectious waste, woodwaste, sludge, and agricultural waste.

auto shredder - the "fluff" consisting of upholstry, paint, plastics, and other non-metallic substances which remains after the shredding of automobiles, discarded household major appliances, and sheetmetal. The State Department of Health Services has classified untreated shred wastes as hazardous.

construction/demolition waste - waste building materials, packaging, and rubble resulting from construction, remodeling, repair and demolitic operations, and consisting mainly of inert materials.

dead animals - animal carcasses requiring disposal that have not been previously used for medical purposes or with known infectious disease

industrial - solid or semi-solid wastes resulting from industrial processes and manufacturing operations, e.g. cement kiln dust, ore process resic grit or screenings removed from a waste water treatment facility, etc.

tires - discarded tire casings.

liquids - wastes which are not spadeable, usually containing less than 50% solids. These wastes include cannery and food processing wastes, landfill leachate and gas condensate, boiler blowdown water, grease trap plumbings, oil and geothermal field wastes, septic tank pumpings, rendering plant byproducts, some sewage sludge, etc. may be hazardous.

mixed municipal - residential and commercial refuse, garbage and/or rubbish. Residential waste is commonly thought of as household garbag commercial wastes contain less putrecible waste and more paper and cardboard.

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other - classification of exempted solid waste facility, or any allowable wastes not included in the above.

II. FACILITY INFORMATION

PROPOSED CHANGE IN DESIGN OR OPERATION, OR NO CHANGE; EFFECTIVE DATE:

For existing permitted facilities, when the operator proposes changes in design, operation, operator, or owner, details of the changes must be to by the LEA. If significant, the permit must be revised prior to implementation of the change. For an application for permit review, if there a changes, so indicate.

AVERAGE ANNUAL LOADING (TPY)

The average amount of wastes the facility will receive on a yearly basis over the next five years, expressed in tons. Must be consistent with th and any California Environmental Quality Act (CEQA) requirements. Volume figures should be converted to tons and the conversion factor sh be documented in the accompanying Report of Facility Information.

PEAK DAILY LOADING (TPD)

The maximum amount of waste the facility is designed to receive, store, process, or dispose of per day, expressed in tons.

FACILITY SIZE:

The area of the facility in acres to be used for receiving, storing, processing, or disposing of wastes, including all monitoring locations and any buffer zone. This will be referred to as the "permitted acreage" and is considered the facility boundaries.

III. OPERATOR INFORMATION:

For land disposal operations, if the operator is different from land owner, attach lease or franchise agreement documenting operator's interest property.

REPORT OF COMPOST SITE INFORMATION

FOR THE

SONOMA COUNTY

CENTRAL COMPOST SITE

January 1996

Prepared for:

Sonoma County Public Health Department
(LEA for the California Integrated Waste Management Board)
Hazardous Waste Division
1030 Center Drive, Suite A
Santa Rosa, CA 95403

Prepared by:

Sonoma County Department of Transportation and Public Works
Integrated Waste Division
575 Administration Drive, Room 117A
Santa Rosa, CA 95403

REPORT OF COMPOST SITE INFORMATION
FOR THE
CENTRAL COMPOST SITE

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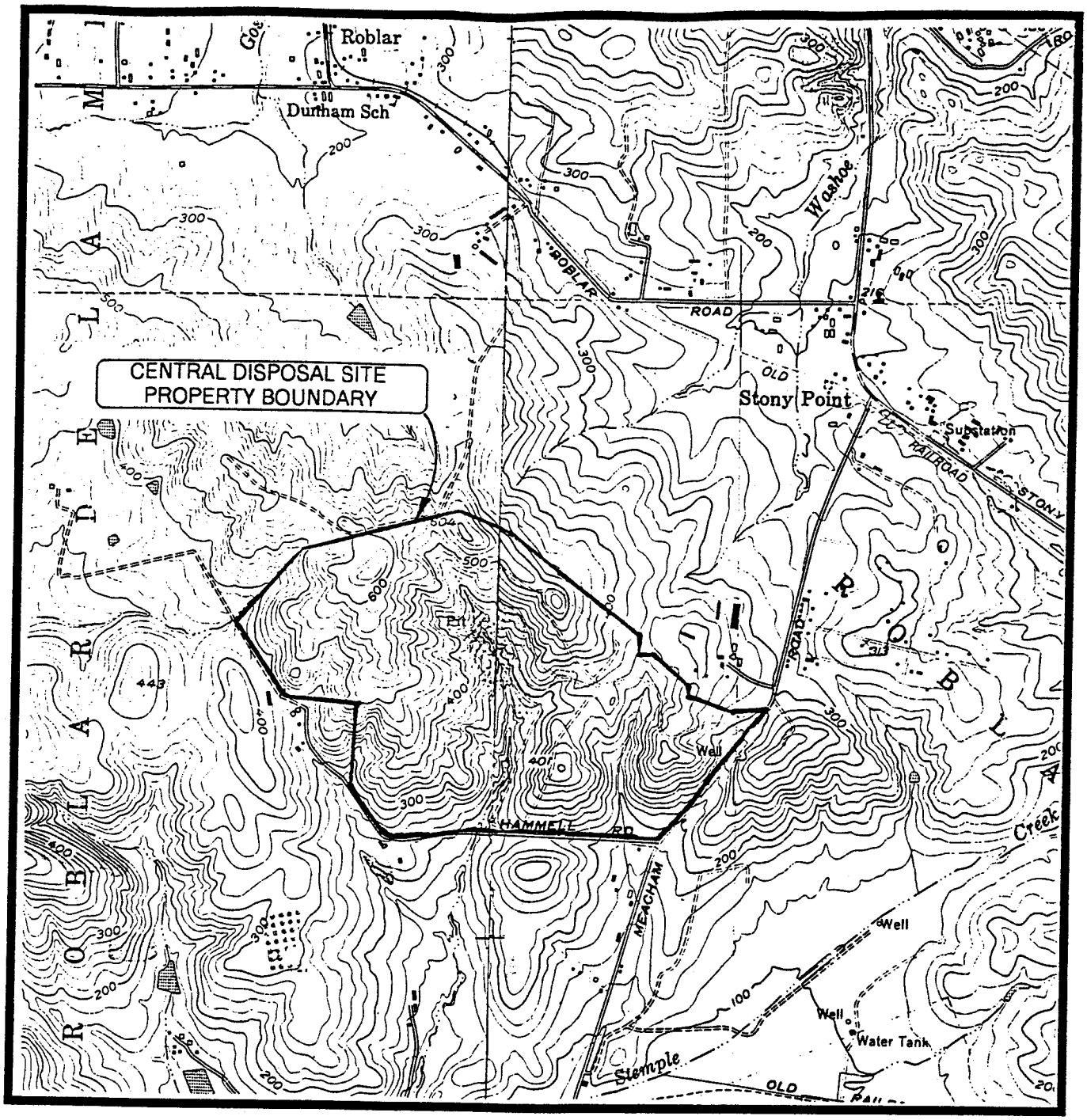

Source:
U.S.G.S. Topographic Maps, Two Rock and Cotati Quadrangles California. 1954. Photorevised 1971 and 1980

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
& PUBLIC WORKS

CENTRAL DISPOSAL SITE
LOCATION MAP

scale 1:24000 **Figure 1**

Report of Compost Site Information

for the

Sonoma County Central Compost Site

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A - Negative Declaration and Initial Study for Wood Waste, Yard Waste Composting and Construction Debris Diversion Project at the Central Disposal Site
Resolution of Board of Supervisors Approving Negative Declaration
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REPORT OF COMPOST SITE INFORMATION

CENTRAL COMPOST SITE

Summary

Name: Central Compost Site,

Solid Waste Inventory System (SWIS) No: 49-AA-0260

Location: 500 Mecham Road. approximately one mile south of Stony Point Road; 4 miles southwest of the City of Cotati

Materials Accepted: Green Material. Clean Green Material
Additives

Design Capacity (Throughput): **300 tons per day peak, 200 tons per day average**

Quantity of Wastes:

Projection over 5-year period (based on Source Reduction and Recycling Elements for Cities and County):

71.800 tons per year (in 1999); which is equivalent to. 200 tons per day (based on 359 operating days per year).

Site Owner: County of Sonoma. Department of Transportation and Public Works

Site Operator: County of Sonoma. Department of Transportation and Public Works. Integrated Waste Division

Report of Compost Site Information prepared by:

Darlene G. Comingore. P.E.

REGISTERED PROFESSIONAL ENGINEER'S CERTIFICATION

This *Report of Compost Site Information for the Sonoma County Central Compost Site* has been developed in accordance with applicable California Integrated Waste Board regulations relating to the operation of a composting facility. This document has also been developed in accordance with regulations as outlined in Title 14 California Code of Regulations, Division 7, Chapter 5, Article 3.2.

REGISTERED PROFESSIONAL
DARLENE G. COMINGORE
No. C041942
Exp. 3/31/96
CIVIL
STATE OF CALIFORNIA

Darlene G. Comingore, P.E.
Sonoma County Department of Transportation and Public Works
California Registered Professional Engineer
C.E. 41942

1/25/96
Date

REPORT OF COMPOSTING SITE INFORMATION
FOR THE
CENTRAL COMPOST SITE

I. FACILITY OVERVIEW

A. Introduction

This Report of Composting Site Information (RCSI) describes the design and operation of the Central Compost Site, a yard debris composting facility, which is owned and operated by the:

County of Sonoma
Department of Transportation and Public Works
575 Administration Drive Room 117A
Santa Rosa, CA 95403
(707) 527-2231.

The day to day operations will be contracted out. The facility is located on land owned by the County of Sonoma.

This RCSI is being prepared to support a Standardized Composting Permit at the Central Disposal Site. A negative declaration for a wood debris, yard debris composting, and construction debris diversion project, certified by the Board of Supervisors March 24, 1992, which supports this RCSI is in Appendix A.

B. Site Location

1. Site Location Map

The facility is located in the County of Sonoma at 500 Mecham Road, Petaluma, California. This address is located in the Rancho Roblar De La Miseria as shown on Figure 1 - Central Site Vicinity Map.

2. Site Plan

The Site Plan is located in Appendix B.

3. Landfill

The Central Compost Site is located on interim cover of an existing landfill, the Central Disposal Site. The Central Disposal Site is owned and operated by the County of Sonoma. It is a class III landfill. The acreage of compost operations on the landfill including the expansion area is approximately **35** acres **(25 acres composting, 10 acres processing)**. The entire active compost pad is located within the landfill boundaries and on interim cover. The compost pad expansion area is also on interim cover and within the landfill boundaries. Documents describing the construction and operation of the Central Disposal Site are available for review at:

Central Disposal Site Headquarters
500 Mecham Road
Petaluma, CA 94952

An unapproved Preliminary Closure Plan is also available for review at the Central Disposal Site.

C. Daily Operations Overview

1. Type of Operation

The composting operation will be an aerobic windrow process. Ground yard debris and additives will be brought daily onto the site and placed into windrows.

2. Operation Cycle

Yard debris and wood debris are received from both self-haul and commercial haulers. Self-haul and commercial drop-off areas are separate from each other. Suitable dimensional lumber will be separated for resale. Dry woody material appropriate for

processing into cogeneration fuel is ground and hauled off the site. Compostable and woody material may also be processed into a mulch material or other marketable products. Yard debris is loaded onto a contaminant inspection sort line if needed to remove contaminants. Clean yard debris is ground and transported to the composting area where it will be placed directly into windrows. Water will be added after grinding to bring the material to 55% to 60% moisture content. Windrows will be turned as needed to maintain aerobic conditions throughout the composting process. The existing equipment is adequate to handle unusual peak loads up to 300 tons per day (tpd).

The windrows will be managed within a range of moisture content of approximately 40-60%. Moisture content will be assessed by feel each time before turning the windrow to ascertain the need for additional water. Temperature will be taken every 150 feet of windrow or fraction thereof at a depth of 12 to 24 inches to insure an operating temperature of 131 to 165°F. Temperatures will be taken every day during the pathogen reduction composting period as required by 14 § CCR 17868.3(a)(3), or as approved by the LEA. During the pathogen reduction period the compost will be turned at least five times. Temperatures may on occasion reach 175°F for a short duration, due to heat build up by microbial activity. Once a temperature reading exceeds 170°F, daily readings will be taken until the temperature has stabilized below 165°F. If the temperature exceeds 175°F, corrective measures will be taken. Examples of corrective measures include turning the windrows or adding high carbon material such as wood chips to slow the biological process.

The maturity of the compost will be determined by field observations. The observations will include a lack of visible leaf, weed, and grass particles; dark brown color of material; sweet scent of the product (though a whiff of ammonia may still be present); and often there will be the presence of a gray cover of particles, which is indicative of actinomycetes. Determination of

maturity will be made by the private contractor's Soil Scientist or staff that he has trained. The carbon to nitrogen ratio of the compost will be determined in a state certified laboratory to verify the field observations. Compost shall be considered mature when its carbon to nitrogen ratio is 18 to 1 or less. The carbon content is determined through organic matter by combustion. A factor of 0.58 is then applied to get total carbon. Total nitrogen content is obtained through Kjeldahl digestion. Compost may be sold immediately once it is mature.

One composite sample of screened compost will be sent to a state certified laboratory for every 5,000 cubic yards of compost in accordance with 14 CCR § 17868.1. Compost is analyzed for metals and pathogens to ensure the end products comply with 14 CCR § 17868.2 and 17868.3.

The average process time will depend on the frequency of turning the windrows. Turning the windrows approximately every ten days will result in a product ready for curing in four months. When windrows are turned every four to five days, the material can be stockpiled in approximately two months.

D. Service Area

The service area for the Central Compost Site is the entire County of Sonoma with the exception of the service area of the Annapolis Landfill. Yard debris from the Central Service Area is hauled directly to the site. Yard debris from the service area of the transfer stations is hauled by transfer trailer from the transfer stations.

E. Nature and Quantity of Wastes to be Accepted

1. Maximum Daily Load Capacity

The maximum daily load capacity is a function of site size, surface quality, composition of incoming material, availability of water, equipment, and personnel available to process the yard

debris and compost. With existing equipment and personnel the maximum material that can be processed is 300 tons per day. **This is the peak load capacity of the site.** The capacity of the site is discussed below.

The initial site capacity is 83 to 170 tons per day depending on whether the windrows are turned every 4-5 or every 8-10 days. This capacity is based on approximately 12,500 linear feet of windrows and either three or six cycles per year of composting on the site. The capacity assumes an initial 2.6 cubic yards per linear foot of windrow and a density of shredded debris of three cubic yards per ton. The average daily throughput of the existing site could be increased by reducing the size of the chipped yard waste brought to the site. This would allow the composting process to be completed sooner and the site could process a greater volume. **The original maximum design capacity was an average of 170 tons per day.** Expansion of the composting area **into the area shown on the Central Site Plan in Appendix B** will allow **an average of 200** tons per day of yard debris to be composted at this site.

The annual capacity of the facility is 71,800 tons or approximately 215,400 cubic yards of chipped green waste, additives and amendments. The maximum active compost at the facility is 36,000 cubic yards at any one time. The maximum feedstock at the site is 600 tons of unprocessed feedstock and 600 tons of processed (cleaned and chipped) feedstock at any one time.

2. Average Daily Throughput

The average daily throughput for 1995 is 198 tons per day. This is based on estimates from the Source Reduction and Recycling Elements prepared by the Cities and County of Sonoma and assumes 359 operation days per year.

3. Average Load Capacity Next Five Years

The annual tonnage of **feedstock** delivered to the site is

projected as described below. This will include clean green material, green material, and additives.

	Total	Average Daily Tonnage
1994	42,000 tons	117
1995	71,000 tons	198
1996	71,800 tons	200

	Total	Average Daily Tonnage
1997	71,800 tons	200
1998	71,800 tons	200
1999	71,800 tons	200
2000	71,800 tons	200

These figures are based on the Source Reduction and Recycling Elements prepared by the Cities and County of Sonoma and assumes 359 operating days per year.

4. Waste Types

a. General

The wastes that will be received at the Organic Material Recovery and Processing Site, which is part of the permitted activity of the Central **Compost** Site, include leaves, brush, tree trimmings, yard clippings, untreated lumber, and stumps. Yard debris and wood debris will be chipped prior to being received at the Compost Site. The materials will be received from residential, commercial, municipal, and some agricultural debris generators.

The estimated quantity of additives and amendments is no more than 7,180 tons per year. Additives may include but are not limited to materials such as diatomaceous earth **and** top soil. All additives will be approved by the California Regional Water Quality Control Board North Coast Region and the Local Enforcement Agency prior to application. Refuse Bulletin No. 200, an application for use of compost additives is in Appendix E. The application for each additive includes the type of additive, any analyses that are necessary, placement methods, and control of odors, vectors, and other nuisances. Additives will be incorporated into the compost with a front end loader, the compost turner, screening system, or other appropriate equipment.

b. High Liquid Content Wastes

High liquid content wastes such as **winery** slurry may be used as a water substitute with approval from the Regional Water Quality Control Board - North Coast Region and other appropriate regulatory agencies. The application states that creamery liquid is a waste handled in this facility. The County is rescinding creamery liquid as a potential waste to be handled.

F. Types and Numbers of Vehicles Anticipated to Enter the Facility

Since the Central Compost Site is located at the Central Disposal Site most of the traffic associated with composting is already coming to the site. The negative declaration in Appendix A includes a traffic study. The traffic bringing yard debris to the site for composting is already bringing that material for disposal. The traffic generated by this project is primarily from sale of compost and the additional employees required for composting. The traffic study estimates that composting will generate 1921 additional round-trip truck trips per year or 7 truck trips per day Monday through Friday to the site. **There are no additional truck trips associated with the project on Saturday and Sunday.** Composting will also generate 1926 additional round-trip auto trips per year or 5 auto trips **(Monday through Sunday)** per day to the site. The study concludes that composting will have no significant impact on the intersections and road ways studied. Traffic between the Organic Material Recovery and Processing Site and the Composting Site may have peaks of 40 round trip truck trips per day when composting rate is at the of maximum 200 tons per day.

II. COMPOST PROCESSING SITE DESIGN, CONSTRUCTION, AND SITE IMPROVEMENTS

A. Composting Site Design

1. Design Plans

A design plan package is located in Appendix B. The design plan

package includes:
Title Sheet
Site Plan
Composting Site Plan
Grading & Drainage Plan
Water Delivery System Plan
Compost Site Expansion
Compost Site Typical Sections

2. Narrative Descriptions

The Title Sheet includes a vicinity and location map and a list of the drawings in the design package.

The Central Site Plan delineates the property limits, the permitted boundaries, existing composting pad, compost pad expansion area, **organic material recovery and processing area, relocation of the organic material recovery and processing area, unloading areas, loading areas, parking areas,** adjacent land uses, and structures within 1000 feet of the boundaries.

The Composting Site Plan shows typical windrow layout and size. The compost pad itself is six inches of shale, on a geotextile fabric, over several feet of interim cover, covering refuse. **The underlying refuse is stabilized by both mechanical and natural compaction of the interim cover. The site is graded to drain to avoid ponding on the landfill surface.** The refuse is underlain by a leachate collection and recovery system. The Grading & Drainage Plan shows the grading and drainage of the compost site.

The Water Delivery System Plan delineates water delivery from the water tanks to the Compost Site and Organic Material Recovery and Processing Site (OMRPS). This includes a proposed water line from the compost sedimentation pond to the OMRPS which is planned for construction in 1995. The Central Water Quality Monitoring Plan indicates the collection points for storm water monitoring for the Compost Site and is

located in Appendix C.

Site access is shown on the Site Plan discussed above. Traffic volumes to the site are discussed in the Traffic Report prepared as part of the negative declaration in Appendix A.

The Compost Site Expansion Plan indicates the access road, storm water controls, water supply and fire protection for two expansion areas. Both expansion areas are located on landfill with interim cover. The expansion area to the west is approximately 4.5 acres and is an expansion of the compost pad. The surface is **of the western expansion is** cement treated pavement. The expansion to the north is approximately 1.3 acres for storage of finished compost. Finished compost will be stored on the raised area around the site and in the northern expansion area as indicated on the plans in Appendix B. **A map in Appendix B indicates the cross section of each area. The cement treated surface will be added to the remainder of the compost pad if it proves feasible.**

There is no separate map detailing the sequence of development as the site is nearly fully developed. The expansion area for the compost pad is shown on the Site Plan. An additional water line discussed above is shown on the Water Delivery System Plan.

B. Composting Site Improvements

1. Identification Signs

The Central Compost Site is within the Central Disposal Site, and shares the same site access. An identification sign for the site is located at the entrance. Directional signs are located within the site to direct traffic to the correct area for delivering yard debris or purchasing compost.

2. Entry Signs

At the entrance to the site there are signs identifying the owner and operator of the site, what materials are accepted, what

materials are not accepted, hours of operations, and general health and safety information.

3. Facility Security

The Central Disposal Site is surrounded by a fence with locking gates at both entrances. In addition a security guard visits and inspects the site on a random basis during hours the site is closed.

4. Roads

The disposal site has a one mile asphalt paved entrance road from Mecham Road up to the white goods and tire deposit area 350 feet beyond the various roads leading to the woodchipping and composting area to provide site access to the public. Roads leading to the woodchipping and composting area have a gravel surface.

5. Visual Screening

The site is generally screened by surrounding topography. Landscaping (trees) have been planted so as to form a screen between the site and the closest neighbor's house.

6. Facility Construction

Two maps showing a schematic drawing of buildings and other structures and general areas for unloading, storage, processing, parking, and loading areas are included in the Appendices. The Compost Site Plan is located in Appendix B. The Lower Site Plan, which depicts the Organic Material Recovery and Processing Site, is located in Appendix D.

III. COMPOSTING FACILITY OPERATIONS

A. Introduction

The site will be open **and operate between** 7 am to 4 pm, seven days per week. The site will

be closed the following six days each year: January 1st, Easter Sunday, July 4th, Labor Day, Thanksgiving, and December 25.

Yard debris and wood debris are received from both self-haul and commercial haulers. Self-haul and commercial drop-off areas are separate from each other. Suitable dimensional lumber will be separated for resale. Dry woody material appropriate for processing into cogeneration fuel is ground and hauled off the site. Woody material may also be processed into a mulch material or other marketable products. **Green material is continually inspected by the contract operator chipping the feedstock.** A trommel screen located prior to the grinding operation reduces the amount of yard debris requiring hand-sorting. Yard debris requiring sorting is loaded onto a contaminant inspection conveyor line from which contaminants are removed. The material is then deposited into the infeed of a grinder for size reduction. The out flow from the grinder is placed into 40 cubic yard roll-off bin or other containers for transport to the composting area where it will be placed directly into windrows. Water will be added after grinding to bring the material to 50% to 65% moisture content.

Unprocessed wood and yard debris will be stored on site for a maximum of **72 hours.**

The composting operation is an aerobic windrow process. Composting will occur entirely on portions of the landfill that have received interim cover. The underlying refuse is stabilized by both mechanical and natural compaction of the interim cover. The site is graded to drain to avoid ponding on the landfill surface. Ground yard debris and additives will be brought daily onto the site and placed into windrows. Each windrow will be 18' wide by 7' high. Windrows will be turned as needed to maintain aerobic conditions throughout the composting process. It is anticipated that each windrow will be turned between every four to ten days depending on how fast it is desired to complete the compost product. Water will be added to the windrows using one of the following methods. A hose with emitters every

12 inches will be placed on top of the compost pile. The hose will be removed prior to turning the windrow and replaced on top

of the pile after the windrow is turned. Another method that may be used will be to spray water on the pile with a water truck.

No more than **10%** by mass of the compost feed stock will be additives **and amendments**. Additives may include but are not limited to materials such as diatomaceous earth, **and** top soil. All additives will be approved by the California Regional Water Quality Control Board and Local Enforcement Agency prior to application. Refuse Bulletins No. 200, an application for use of compost additives, is in Appendix E. The application for each additive includes the type of additive, any analyses that are necessary, placement methods, and control of odors, vectors, and other nuisances. The application for each additive includes the type of additive, any analyses that are necessary, placement methods, and control of odors, vectors, and other nuisances. Additives will be incorporated into the compost with a front end loader, the compost turner, screening system, or other appropriate equipment.

Temperature will be taken every 150 feet of windrow or fraction thereof at a depth of 12 to 24 inches to insure an operating temperature of 131 to 165°F. Temperatures will be taken every day during the pathogen reduction composting period as required by 14 § CCR 17868.3(a)(3) or as approved by the Local Enforcement Agency. During the pathogen reduction period the compost will be turned at least five times. Temperatures may on occasion reach 175°F for a short duration, due to heat build up by microbial activity. Once a temperature reading exceeds 170°F, daily readings will be taken until the temperature has stabilized below 165°F. If the temperature exceeds 175°F, corrective measures will be taken. Examples of corrective measures include turning the windrows or adding high carbon material such as wood chips to slow the biological process.

The windrows will be operated within a range of moisture content of approximately 40-60%. Moisture content will be assessed by feel each time before turning the windrow to ascertain the need

for additional water. All personnel will be trained and supervised by experienced staff to evaluate moisture content by feel until each person is proficient in this procedure.

A critical component of composting is adequate oxygen to insure the process remains aerobic. Temperature dropping dramatically prior to compost maturity is a sign of insufficient oxygen. The oxygen demand of the compost varies widely with the feedstock, moisture content, and the stage of decomposition the compost is in. Moisture content and temperature will be used to indicate whether the correct combination of moisture and oxygen is present.

The maturity of the compost will be determined by field observations. The observations will include a lack of visible leaf, weed, and grass particles; dark brown color of material; sweet scent of the product (though a whiff of ammonia may still be present); and often there will be the presence of a gray cover of particles, which is indicative of actinomycetes. Determination of maturity will be made by the private contractor's Soil Scientist or staff that he has trained. The carbon to nitrogen ratio of the compost will be determined in a state certified laboratory to verify the field observations. Compost shall be considered mature when its carbon to nitrogen ratio is 18 to 1 or less. The carbon content is determined through organic matter by combustion. A factor of 0.58 is then applied to get total carbon. Total nitrogen content is obtained through Kjeldahl digestion. Compost may be sold immediately once it is mature.

One composite sample of screened compost will be sent to a state certified laboratory for every 5,000 cubic yards of compost in accordance with 14 CCR § 17868.1. Compost is analyzed for metals and pathogens to ensure the end products comply with 14 CCR § 17868.2 and 17868.3.

Aspergillus is controlled by moisture since it is only of concern in dry material. Sprinklers installed at the grinder to control

dust will reduce the movement of Aspergillus. At the compost site, composting takes place at 40 to 60% moisture content. Aspergillus is not a concern under these conditions. When compost is screened a moisture content of approximately 35% is maintained. Employees are provided with dust masks and no screening takes place under windy conditions.

The average process time will depend on the frequency of turning the windrows. Turning the windrows every seven to nine days will result in a product ready for curing in four months. When windrows are turned every three to four days, the material can be stockpiled in two months. It is estimated that yard debris will shrink about 40% to 60% by weight during the composting process. This will mean that ultimately there will be **an average over five years of** approximately **100** tons of compost available for distribution per day.

B. Facility Personnel

1. Availability

Employees used in the daily operations of the Central Compost Site are listed below. The number in each category are those on site on a daily basis, **7** days per week, when the throughput is at its maximum of **200** tons per day.

Equipment Operators	1.5
Quality Control Spotters	1.5
Site Supervisor	1

Employees used in the daily operation of the Organic Material Recovery and Processing Site are listed below.

Heavy Equipment Operators	4
Drivers	3
Sorters	6
Site Supervisor	1

2. Training

The contract operator has an Injury Prevention and Safety Program which includes the following elements:

a. Detailed instructions and training sessions on the use of all equipment utilized such as the windrow turner, screener, loaders, chipper, sorter, and trucks;
b. hazardous waste identification training;
c. a comprehensive fire evacuation plan;
d. flammable and combustible materials identification; and
e. implementation of an overall injury and illness prevention program, including the posting of all regulations required by law.

In addition to the above training key employees are trained in the compost process including but not limited to how to identify the moisture content of the compost and how to identify mature compost.

3. Supervision

The contract operator will have a site supervisor on the site five days per week.

In the event of an emergency the following individuals should be notified in descending order.

Name	Office Phone (8-5)	Home Phone (After 5)
County of Sonoma personnel		
Rich Doble	(707) 792-0547	(707) 823-3613
Ken Wells	(707) 527-2231	(707) 526-9385
Sonoma Compost Company personnel (contract operator for compost operations)		
Paul Paddock	(707) 578-5459	(707) 887-9624

Will Bakx	(707) 664-9113	(707) 823-7039

Empire Waste Management Inc. personnel (contract operator of wood and yard debris chipping operations)

Bret Boccabella	(707) **585-0291**	(707) 664-0721
Danny Furia	(707) 794-0842	(707) 526-1183

4. Attendant

The Organic Material Recovery and Processing Site which includes material delivery and retail sales is open to the public and has attendants seven days per week. The composting area is primarily open to wholesale compost sales. The composting area has one attendant **five** days per week.

5. Operator

The site is owned by the County of Sonoma. The composting operation is contracted out to a joint venture group of Sonoma Compost Company (SCC) and Empire Waste Management, Inc. (EWMI). SCC will be responsible for all composting at the site as well as sales of the compost. EWMI will be responsible for receiving, sorting, and chipping all wood and yard debris. The contract operator has no ownership interest in the site. Payment for operations is based on tonnage of material handled by the operator.

The Sonoma Compost Company has experience in all aspects of composting organic material. They have implemented product evaluation studies for agricultural and horticultural applications and conducted comprehensive marketing studies in Sonoma County. The management organization is shown below.

County of Sonoma Department of Transportation and Public Works
575 Administration Drive, Room 117A, Santa Rosa, CA 95403 Phone: (707) 527-2231

Edward J. Walker - Public Works
Ken Wells - Integrated Waste Division Manager
Rich Doble - Senior Civil Engineer

Sonoma Compost Company
550 Mecham Road, Petaluma, CA 94952
Phone: (707) 664-9113

Paul Paddock - General Manager
Allan Siegle - Controller & Agricultural Marketing
Wilhelmus Bakx - Soil Scientist & Director of Product Research & Development

Empire Waste Management, Inc.
3400 Standish Avenue, Santa Rosa, CA 95407
Phone: (707) 585-0291

Bret Boccabella
Danny Furia

Logs of the following items will be maintained by the County:

1. tons per day of yard debris and wood debris delivered to the Organic Material Recovery and Processing Site (OMRPS);
2. record of complaints regarding environmental concerns and steps taken to resolve complaint; and
3. record of other problems associated with facility and steps taken to resolve problem.

Logs of the following items will be maintained by Sonoma Compost Company:

1. tons per day of yard debris products leaving the facility in wholesale quantities;
2. volume per day of yard debris products leaving the facility in retail quantities;
3. windrow characteristics, additives and moisture addition,

results of all moisture content and temperature measurements and fluctuations, and type and frequency of aeration;

4. results of testing programs including results from laboratory tests, the number of samples taken, the locations of sample sites, and analytical results from all testing;
5. a description of the sale and distribution of all finished products;
6. record of complaints regarding environmental concerns and steps taken to resolve complaint;
7. record of other problems associated with facility and steps taken to resolve problem; and

8. results of testing required by Title 14 CCR to insure that finished compost meets the standards for maximum metal concentrations and pathogen reduction.

Logs of the following items will be maintained by Empire Waste Management Inc.:

1. volume of material transferred from the Organic Material Recovery and Processing Site to the Compost Site;
2. tons per day of wood debris products leaving the facility in wholesale quantities;
3. volume per day of wood debris products leaving the facility in retail quantities;
4. record of complaints regarding environmental concerns and steps taken to resolve complaint; and
5. record of other problems associated with facility and steps taken to resolve problem.

All records kept by the County will be kept at the headquarters of the Central Disposal Site, 500 Mecham Road, Cotati, CA 94952.

All records kept by Sonoma Compost Company will be kept at the Compost Retail Sales Office and the upper site office at 550 Mecham Road, Cotati, CA 94952. All records kept by Empire Waste Management, Inc. will be kept at 3400 Standish Avenue, Santa Rosa, CA 95407.

C. Facility Equipment

1. Type, Capacity and Number of Units

The equipment to be used for the composting process includes the following, or equivalent:

Scarab Model 18 compost turner

Michigan L90B wheel loader with 5 cubic yard bucket

Michigan wheel loader with 5 cubic yard bucket

Screens
- Portable C.E.C. Vibrating Screen System

Stacking Conveyor

Storage Container - Portable walk-in storage box 8' x 20' with an awning

Field Test Equipment
- Reotemp Dial Thermometers (18" & 72")
- Rapitest pH Meter

Laboratory Test Equipment
- Scale

2. Equipment Maintenance

The compost operator will have a service contract for the compost turner or will use back-up equipment such as loaders for turning to insure that the site will be operational within 24 hours of any break down. The loaders are stored on the southwest side of the composting site adjacent the upper office. All other equipment stays in the field. The frames of equipment are washed down in-place to remove compost from the equipment. The engines of the equipment are not washed down.

3. Standby Equipment

A loader from the processing site will be available as back-up in the event of break down of the loader. In the event of a major breakdown, appropriate equipment will be rented.

The County has implemented the following procedures to assure adequacy of standby equipment. The contract operator shall notify the County within 24 hours of breakdown of equipment that would prevent the operation of compost turning requirements. Daily written updates shall be provided to the County on the status of the equipment repair or delivery of backup equipment. If after seven days of continual equipment breakdown, windrow turning equipment is not repaired or backup equipment on-site and the windrows are not being turned, the County will initiate actions to obtain the equipment and labor to comply with compost turning necessary for pathogen reduction requirements.

4. Housekeeping

Used oil is recycled and empty containers are disposed of. Used parts are recycled when possible or disposed of if not. Inoperable equipment not intended for future use will be removed. Litter control of the composting site is a continuous process performed by existing employees or may be contracted out. Compost material will be kept cleared between compost windrows.

D. Materials Handling Activities

1. Confined Unloading

Yard debris and wood debris are received from both self-haul and commercial haulers. Self-haul and commercial drop-off areas are separate from each other. Yard debris is chipped and hauled to the compost site. At the compost site, yard debris is unloaded directly into windrows. Unprocessed yard debris is stockpiled no more than 72 hours prior to processing and no more than 600 tons will be stored. Yard debris will be placed into piles no bigger

than 30 feet by 30 feet by 10 feet high with a minimum of 15 foot separation between stockpiles. After yard debris has been chipped it will be stockpiled no more than 72 hours and no more than 600 tons will be stockpiled on site.

2. Salvaging

a. Processing Area

Suitable dimensional lumber will be separated for resale. Dry

woody material appropriate for processing into cogeneration fuel is ground and hauled off the site. Woody material may also be processed into a mulch material or other marketable products. Contaminated yard debris is loaded onto a contaminant inspection conveyor line from which contaminants, both salvageable and nonsalvageable, are removed. Aluminum is the only contaminant that is salvaged at this time. Salvaged material is placed directly into bins and removed when full. Nonsalvageable contaminants are placed in bins and disposed of at the Central Disposal Site as described in Section 5 below.

b. Storage of Salvage

Salvaged material is stored in bins.

c. Removal

Aluminum is stored in a three-yard bin and is removed when full.

d. Non-Salvageable Items

All salvaging at the facility is conducted by the contractor's employees. An initial screening is done in the unloading area. Contaminated material is then loaded onto a sort line from which contaminants are removed and placed in a debris box. The public is not allowed to salvage. The unloading area is staffed seven days per week to supervise unloading and prevent salvaging by the public.

3. Material Preparation

Yard debris is ground in a tub grinder and in a horizontal feed grinder on site. The grinders are separated from unloading activities and other public access area. Access to the area surrounding the tub grinder is restricted to authorized personnel and is signed as a hard hat area. Prior to placement of the yard debris in the grinders, contaminated yard debris is processed to remove contaminants and other hazards.

4. Scavenging

No scavenging is allowed. The area for drop-off of wood debris and yard debris is staffed seven days a week.

5. Solid Waste Removal

a. Time Limits

Solid waste is stored in a debris box or garbage truck until full. The truck is emptied approximately every week and the debris box is emptied every two days at the Central Disposal Site. Odor or vectors have not been a problem from this waste, because the waste is primarily dry rubbish. Daily inspection of this area will result in immediate disposal if odor or vectors are noted.

b. Anticipated Amount

An education program from the commercial haulers is in place to limit the amount of unsuitable composting material. The type of unsuitable material anticipated is primarily dry rubbish, but may include recyclables, food waste, non-compostables, and other municipal solid debris. Contamination of yard debris is anticipated to be less than two percent by weight.

c. Method for Final Disposal

Any nonsalvageable nonhazardous waste is disposed of at the Central Disposal Site.

6. Cleaning

The County will minimize the intrusion of waste and litter from blowing onto the Organic Material Recovery and Processing Site and the Composting Site using litter fences and litter control crews. The contract operator will clear the site daily or more frequently

if necessary to prevent accumulation of litter.

7. Special Handling Wastes

a. Burning Materials

No burning materials are accepted at either the Central Disposal Site or the Central Compost Site. The site contains three wharf hydrants on the landfill property, seven standard hydrants at the Composting Site, and one standard hydrant at the Organic Material Diversion and Processing Site. If materials catch on fire the procedure for extinguishing it is to clear away materials that are not burning, spread out the fire with a back hoe or loader, and smother it with water from one of the hydrants.

b. Liquid Wastes

The Composting Site may accept liquid wastes such as liquid winery waste to be used as a substitute for water in the composting process with approval from the appropriate regulatory agencies. Refuse Bulletin No. 200, an application for use of these liquid wastes, is in Appendix E.

E. Processing Operations

1. Pre-Operational Test Plot

This site has been operating under a permit exemption since September 13, 1993 and has successfully composted approximately 30,000 tons of yard debris.

2. Development Stages

The site is fully operational. The composting pad is currently 13.6 acres. The area including the compost sediment pond, office, perimeter, road, etc. encompasses 19.2 acres. The remaining

development is a water line from the compost sedimentation pond to either the tub grinder or the compost pad so that storm water can be reused. This will be completed when the water is required. It is planned to extend the composting area to the west of the current location in 1995. Finish compost will be stored on an additional area to the north. These expansions will encompass an additional 5.8 acres on the landfill site. The total site will encompass 35 acres **(25 acres for composting and 10 acres for wood and yard debris processing)**.

3. Type of Operation

a. Waste Handling and Separation

The composting operation will be a windrow process. Ground yard debris and additives will be brought daily onto the site and placed into windrows. Each windrow will be 18' wide by 7' high. Windrows will be turned as needed to maintain aerobic conditions throughout the composting process. It is anticipated that each windrow will be turned between every four to ten days depending on how fast it is desired to complete the compost product.

Additives may include but are not limited to materials such as diatomaceous earth, top soil, **and** winery by-products.

All additives will be approved by the California Regional Water Quality Control Board North Coast Region and Local Enforcement Agency prior to application. Refuse Bulletin No. 200, an application for use of compost additives is in Appendix E. The application for each additive includes the type of additive, any analyses that are necessary, placement methods, and control of odors, vectors, and other nuisances.

Amendments that are allowed to be stored on site will be stored as shown on the Composting Site Plan in Appendix B. Any fertilizer amendments stored onsite will be covered by a tarp to avoid impacts

to water or air. Amendments will be incorporated into the compost with the compost turner.

Temperature will be taken every 150 feet of windrow or fraction thereof at a depth of 12 to 24 inches to insure an operating temperature of 131 to 165°F. Temperatures will be taken every day during the pathogen reduction composting period as required by 14 § CCR 17868.3(a)(3) or as approved by the Local Enforcement Agency. During the pathogen reduction period the compost will be turned at least five times. Temperatures may on occasion reach 175°F for a short duration, due to heat build up by microbial activity. Once a temperature reading exceeds 170°F, daily readings will be taken until the temperature has stabilized below 165°F. If the temperature exceeds 175°F, corrective measures will be taken. Examples of corrective measures include turning the windrows or adding high carbon material such as wood chips to slow the biological process.

The windrows will be operated within a range of moisture content of approximately 40-60%. Moisture content will be assessed by feel each time before turning the windrow to ascertain the need for additional water. All key personnel will be trained and supervised by experienced staff to evaluate moisture content by feel until each person is proficient in this procedure.

A critical component of composting is adequate oxygen to insure the process remains aerobic. Temperature dropping dramatically prior to compost maturity is a sign of insufficient oxygen. The oxygen demand of the compost varies widely with the feedstock, moisture content, and the stage of decomposition the compost is in. Moisture content and temperature will be used to indicate whether the correct combination of moisture and oxygen is present.

The maturity of the compost will be determined by field observations. The observations will include a lack of visible leaf, weed, and grass particles; dark brown color of material; sweet scent of the product (though a whiff of ammonia may still be

present); and often there will be the presence of a gray cover of particles, which is indicative of actinomycetes. Determination of maturity will be made by the private contractor's Soil Scientist or staff that he has trained. The carbon to nitrogen ratio of the compost will be determined in a state certified laboratory to verify the field observations. Compost shall be considered mature when its carbon to nitrogen ratio is 18 to 1 or less. Compost may be sold immediately once it is mature.

b. Process Water

The water supply source is an off-site water well and storage tanks. Water lines run to the Organic Material Recovery and Processing Site (OMRPS) to be used in the chipping of the wood debris. Water is sprayed into the grinder for dust control. After grinding water is added as needed to bring the moisture content to up to 55 to 60 percent. The OMRPS uses about 22,000 gallons per day of water.

Water lines run to the Compost Site with a spigot at the end of every three windrows. Water may be introduced to the windrow by placing a hose with emitters every 12 inches on top of the compost pile. The hose will be removed prior to turning the windrow and replaced on top of the pile after the windrow is turned. Other appropriate methods may be employed. Water use at the Compost Site is approximately 40,000 gallons per day.

c. Preprocessing Procedures

Yard debris delivered by compactor truck or transfer trailer, that contains contaminants, is loaded onto a contaminant inspection conveyor line from which contaminants, both salvageable and nonsalvageable, are removed. The clean material is then deposited into the infeed of a grinder for size reduction.

Unprocessed yard debris is stockpiled no more than 72 hours prior to processing and no more than 600 tons will be sorted. Yard debris will be placed into piles no bigger than 30 feet by 30 feet

by 10 feet high with a minimum of 15 foot separation between stockpiles. After yard debris has been chipped it shall be stockpiled no more than 72 hours and no more than 600 tons shall be stockpiled on site.

d. Process Time

The average process time will depend on the frequency of turning the windrows. Turning the windrows every seven to ten days will result in a product ready for curing in four months. When windrows are turned every four to five days, the material can be stockpiled in two months. The average daily throughput from **1996** through **2000** will be approximately **200** tons per day of yard debris. It is estimated that yard debris will shrink about 40% to 60% by weight during the composting process. This will mean that ultimately there will be an average over **five** years of approximately **100** tons of compost available for distribution per day. **The average length of time finished compost is stored on site is six weeks. Smaller amounts of compost for specialized markets may be stored on site as long as six months, for curing purposes.**

e. Chemical or Bulking Agents

Additives may include but are not limited to materials such as diatomaceous earth, top soil, **and** winery by-products. Additives that are added during composting will be lain on top of the windrow and incorporated into the compost with the compost turner. All additives by the California Regional Water Quality Control Board North Coast Region and the Local Enforcement Agency prior to application. Refuse Bulletin No. 200, an application for use of compost additives, is in Appendix E. The application for each additive includes the type of additive, any analyses that are necessary, placement methods, and control of odors, vectors, and other nuisances. Amendments that are added after composting is completed will be blended with a front loader, two conveyor belts or other appropriate equipment.

4. Climatic Conditions

The climate is typified by cool wet winters and, in general, moderately warm summers. This moderately warm summer period is interrupted several times by hot spells that usually last from 5 to 10 days before dissipating.

Rainfall in this area is seasonal with little or no rainfall occurring from May through September. Roughly 85% of the total annual precipitation occurs from November through March. Average annual rainfall is 27 inches.

The wind in the particular area blows in the easterly direction at least 80% of the time.

Access roads to and around the composting site are either asphalt-concrete or rocked to provide all-weather access. The composting pad is covered with a filter fabric, six inches of shale, and of one to two inches of yard debris below the compost windrows to prevent underlying soil and rocks from mixing with the compost. This will also help alleviate operational difficulties during wet months. Other improvements are anticipated to provide easier use of the site during the wet months.

The compost pad is graded at approximately 3% to promote rapid drainage of the site. This along with the design of the compost pad should allow the compost to be aerated within the seven to ten day period specified above during wet weather.

5. End Use

The intended use of the compost is as a soil amendment for residential, commercial, institutional, and agricultural applications. Compost will be sold on both a wholesale and retail basis. Amendments and additives will be used to produce compost for specific markets.

Ten percent of the compost will be utilized by the Cities and the

County of Sonoma for parks, landscaping, and other public projects. The remainder will be sold to agricultural and horticultural industries and the public.

F. Composting Facility Controls

1. Leachate Control

Because of rigorous monitoring and control of the moisture content of the yard debris as it is composting, it is not anticipated that leachate will be generated. Regardless, all storm water run off from the windrow area will be collected and directed to a storm water sedimentation pond. The design basis for the area of the pond is greater than the 100-year storm. The pond is sized to contain as much water as possible within the physical constraints of the site and for many storms there should be little or no storm water runoff. The compost sedimentation pond has a one foot liner of soil with a permeability of 1 X 10-6 cm/sec or less.

For larger storms, run off will be discharged from the compost sedimentation pond to the existing storm water diversion system for the Central Disposal Site. This discharge will flow through two additional sedimentation ponds prior to discharge from the CDS. The number of storm events that will result in discharge from the composting sedimentation pond will be further reduced, because the water in the pond will be used for the composting process.

Remedies for adverse impacts on off-site run-off include but are not limited to installing a method to filter the storm water prior to release from the sedimentation pond, hauling water to a waste water treatment facility, modifying the operations at the compost site, and shutting down the compost facility.

It is anticipated that the impacts of this proposal will be the following:

1. During approximately nine months of the year, the composting

operations require far more water than storm water runoff. During these months, the pond will have no discharge and therefore no impact to the surface water.

2. During the three wettest months there will be intermittent discharge during the larger storms. The volume of water from the larger storms will dilute run off from the compost windrows themselves. The storm water from the compost sedimentation pond will also go through two additional sedimentation ponds. Therefore, we anticipate that discharge from the compost sedimentation pond will not change the quality of water leaving the site.

To verify this assumption additional storm water monitoring is being done at the Central Disposal Site. The additional monitoring will include the following:

1. Storm water will be monitored leaving the site prior to the discharge of storm water from the compost sedimentation pond.

2. Storm water discharge from the compost sedimentation pond will be monitored.

3. The lag time of discharge moving from the compost pond to the leaving the site will be determined. Storm water will again be monitored leaving the site after the lag time has elapsed.

A letter from the California Regional Water Quality Control Board, North Coast Region approving this approach is in Appendix E.

2. Vadose Zone Monitoring

There is no vadose zone monitoring at the Central Compost Site or the Central Disposal Site.

3. Groundwater Monitoring

The active composting pad of the Central Compost Site is located

entirely on top of the Central Disposal Site which has a leachate collection system and a ground water monitoring program. No additional ground water monitoring is proposed. A copy of the waste Discharge Requirements and Monitoring and Reporting Program is in Appendix E.

4. Drainage Control

The entire compost pad is surrounded by a raised road to prevent storm water from running on to the compost pad. There are four berms within the compost pad to create discrete cells and to direct storm water to the compost sedimentation pond. The site is graded to a 3 percent slope. All surface water is directed to a culvert that transports the storm water to the compost sedimentation pond. The storm water control system is described in paragraph 1 of this section. The design basis for the drainage control devices is the 24 hour-100 year storm. A map showing the drainage control system titled Grading and Drainage Plan is located in Appendix B.

5. Pollution Control

No pollution control devices are proposed for this site. Pollution control is accomplished with the proper design and operation of the Central Compost Site as described in this document.

6. Nuisance Control

The most common nuisances associated with composting are odor and the threat of fire. To minimize odor problems, the site is carefully operated to maintain aerobic conditions during composting. The location of the site also isolates it from all, but one neighbor.

Fire control consists of the following:

a. Operator will monitor the temperature in the windrows as

described above to prevent fires.

b. Arrangement of the windrows such that: 1) every other row is thirteen feet wide to allow fire trucks access to the windrows; 2) windrows are no longer than 500 feet without a twenty foot break; and 3) a twenty foot clear path surrounding the composting area to provide access and a fire break. A letter approving the length of the compost windrow is in Appendix E.

c. As required by the Rancho Adobe Fire District, the Central Site has two water tanks totally 152,000 gallons for fighting fires as for all other water uses at the Central Disposal Site. Water supply line(s) deliver water to 7 hydrants at the Compost Site and 1 hydrant to the Organic Material Recovery and Processing Site for use by the Rancho Adobe Fire District.

d. Two 4,000-gallon water trucks with pumping capability are available on-site to help combat fires.

The design and operation of the Central Compost Site is in compliance with the perimeter clearance requirements. The agency having jurisdiction over the site is Rancho Adobe Fire District.

There will be no salvaging of noncomposted debris at the compost site. All of the yard debris will be received, sorted, and chipped in the Organic Material Recovery and Processing Site.

7. Dust Control

The access road from Mecham Road through the gate house has an asphalt-concrete surface, while the extension of that road which leads to the composting area is an all-weather road. To further reduce the potential for dust, the road leading to and around the composting area is periodically sprayed by the water truck.

During chipping, water is sprayed into the grinder to reduce

dust. Additives will be prevented from blowing away by keeping them moist or covering them.

8. Vector and Bird Control

Insects or rodents are not expected to be a problem with the possible exception of flies. The contract operator will monitor for flies and engage the services of an entomologist or pest control consultant as needed. If they prove to be a problem, fly traps will be set. Birds are not expected to be a problem as they will more naturally be attracted to the landfill.

9. Litter Control

Litter will be controlled by a combination of erection of litter fences and clean-up crews. A fence is built around the area that accepts and processes the yard debris and wood debris. The County Road Department employs a full-time road litter clean-up crew. The approach roads to the Central Site are patrolled for litter once per month. The frequency is increased if complaints are received. Litter within the Organic Material Recovery and Processing Site and Composting Site will be removed by the contract operator as necessary.

10. Noise Control

The negative declaration for wood debris, yard debris composting, and construction debris diversion project, certified by the Board of Supervisors March 24, 1992 found that there will be no significant increase in the noise level at the property boundary.

Noise from the composting operations is not likely to create health hazard to persons using the site or a public nuisance to nearby residents. A noise study, which was done as part of the negative declaration is included in Appendix A.

Annual noise measurements shall be taken to ensure compliance with general plan standards.

11. Odor Control

Objectionable odor in composting is usually associated with improper processing of the incoming materials such that they become saturated with water and/or the process becomes anaerobic. Some odor is expected with proper operation. Operational procedures described above will be used to insure that the yard debris has adequate oxygen and the right amount of moisture to insure the operations won't become objectionably odoriferous.

While in the past there have been some complaints associated with the chipping area, the operations have already improved such that odor complaints have diminished. Operational improvements to continue and improve this trend are the reduction of stockpile time to 72 hours, increasing the area of the composting pad to reduce the stockpile time, and the propose relocation of the processing area to the west side of the landfill which is farther from receptors and more protected from the wind.

12. Traffic Control

Traffic is controlled on site by the use of directional signs. Both the Organic Material Recovery and Processing Site and the Compost Site feature one way traffic patterns and separation of public and commercial traffic to minimize traffic conflicts.

IV. MAINTENANCE PROGRAM

A. Facility Maintenance Program

The access road to the Compost Site and the perimeter road around the site will be maintained for all-weather access by the County of Sonoma. Any maintenance to the active composting area that is required due to differential settlement of the landfill will be provided by the County. The maintenance of the sedimentation pond and off-site drainage will be provided by the County. Any maintenance of County-installed power and water delivery systems will be the responsibility of the County. The Compost Site will

be inspected annually in the late summer and repairs will be completed prior to the start of the rainy season.

All other maintenance of the site will be the responsibility of the contract operator.

V. HEALTH AND SAFETY PROGRAM

A. Sanitary Facilities

A permanent building is at the Central Disposal Site which houses the Refuse Division - Operations Headquarters. Located within this building are two restrooms each with flush toilets and a shower. Wastewater from the headquarter's building is treated with a septic system adjacent to the Operations Headquarters' building.

One portable toilet is located at the Compost Site. Two interior toilets with holding tanks are located at the Organic Material Recovery and Processing Site.

B. Water Supply

The source of water for the headquarters building is an off site water well. The well water and delivery system is chlorinated. Drinking water is delivered to the processing, retail, and composting offices in the form of 5-gallon water bottles.

C. Communications Facilities

Communication facilities at the site consist of two phone lines to the Composting Site and three lines to the retail office at the Organic Material Recovery and Processing Site (OMRPS). A sixth line may be added to the processing office of the OMRPS.

D. Lighting

Operations will not be conducted at night.

E. Fire Fighting Equipment

All motorized equipment as well as mobile trailers are supplied with a fire extinguisher. The supply and maintenance of fire extinguishers is the responsibility of the contract operator. In

addition there are seven fire hydrants at the Compost Site and one fire hydrant at the Organic Material Recovery and Processing Site.

F. Protection of Users

The delivery of organic material from the public is supervised by trained contractor employees to ensure that no solid waste is dropped off. All yard debris that is delivered in bulk by compactor truck, debris box, or transfer trailer is processed through a sort line. This is done in a restricted area so that the public is not in contact with nonsalvageable waste.

G. Safety Equipment

The primary safety equipment are fire extinguishers, ear protection devices, hard hats, and dust masks. The area around the tub grinder is signed as a hard hat area. Fire extinguishers are discussed above. Ear protection devices are used while employees are operating or working around the tub grinder, the sort-line, and motorized equipment such as the loader or compost turner. Dust masks are worn during screening operations.

H. Power Failure

The effect of power loss would be to cut off power to grinders, conveyors, sort-line, and offices at the Composting Site and the Organic Material Recovery and Processing Site. In the event of extended power failure, the contract operator can rent a generator.

VI. POST-OPERATIONAL USE

The Central Compost Site will continue to be located as indicated in the Site Plan until the placement of garbage at the landfill requires it to be relocated. After the site is moved the land use will be a solid waste disposal site and eventually a closed

landfill. **The site restoration will be done in accordance to 14 CCR 17870.** It is anticipated that the fill will progress to the Central Compost Site by 2002. It is possible that the composting will be relocated to another area within the Central Disposal Site. The feasibility of this will be studied at a future time.

VII. FACILITY RECORDS AND REPORTING PROCEDURES

A. Weight/Volume Records

Daily logs of the following items will be maintained by the County:

1. tons per day of yard debris and wood debris delivered to the Organic Material Recovery and Processing Site (OMRPS).

Daily logs of the following items will be maintained by Sonoma Compost Company:

1. tons per day of yard debris products leaving the facility in wholesale quantities; and
2. volume per day of yard debris products leaving the facility in retail quantities.

Daily logs of the following items will be maintained by Empire Waste Management Inc.:

1. volume of material transferred from the Organic Material Recovery and Processing Site to the Compost Site;
2. tons per day of wood debris products leaving the facility in wholesale quantities;
3. volume per day of wood debris products leaving the facility in retail quantities; and
4. **Record of loads and materials rejected because of contamination.**

The results of testing required by Title 14 CCR to insure that finished compost meets the standards for maximum metal

concentrations and pathogen reduction will also be kept by Sonoma Compost Company

All records kept by the County will be kept at the headquarters of the Central Disposal Site, 500 Mecham Road, Cotati, CA 94952. All records kept by Sonoma Compost Company will be kept at the Compost Retail Sales Office at 550 Mecham Road, Cotati, CA 94952. All records kept by Empire Waste Management, Inc. will be kept at 3400 Standish Avenue, Santa Rosa, CA 95407.

B. Special Occurrences

A log of complaints regarding environmental concerns and steps taken to resolve complaint will be kept by the County, and both contract operators. A log of other problems associated with facility and steps taken to resolve problem will be kept by the County and both the contract operators.

The persons authorized to log such entry include the Operations Manager for the Central Disposal Site and supervisory personnel for the County, Sonoma Compost Company, and Empire Waste Management, Inc.

C. Inspection of Records

All records are available for inspection Monday through Friday from 8:30 a.m. to 3:30 p.m. Records kept by the County may be inspected at:
Central Disposal Site Headquarters
500 Mecham Road
Petaluma, CA 95472
(707) 792-0547

Records kept by Sonoma Compost Company may be inspected at:

550 Mecham Road
Petaluma, CA 95472
(707) 664-9113

Records kept by Empire Waste Management may be inspected at:

3400 Standish Avenue
Santa Rosa, CA 95407
(707) 584-4200

VIII. CONDITIONS, CRITERIA, AND REQUIREMENTS

A. Conditions, Criteria, and Requirements

A negative declaration for wood debris, yard debris, composting, and construction debris diversion projects at the Central Disposal Site was certified by the Board of Supervisors on March 24, 1992. The negative declaration, the resolution by the Board of Supervisors, and a Notice of Determination are in Appendix A.

Letters from the California Regional Water Quality Control Board - North Coast Region approving the location of the composting site on the landfill, the proposed design of the site, and the handling of storm water are in Appendix E. This includes approval of placement of composting on interim landfill cover and waiver of the requirement for a liner with a permeability of 1x 10^{-6} cm/sec^2. The following permits govern operations at the Central Compost Site.

Permit	Issuing Agency
Solid Waste Facilities Permit No. 490-AA-0001	Local Enforcement Agency California Integrated Waste Management Board
Permit Exemption to allow composting dated 7/22/94	Local Enforcement Agency
Monitoring and Reporting Program Order No. 89-8 Order No. 93-77	California Regional Quality Control Board, North Coast Region

Storm Water Monitoring Permit	California State Water Resources Control Board

Permits held by others for operations at the Central Compost Site.

Permits held by Empire Waste Management, Inc., 3400 Standish Avenue, Santa Rosa, CA 95407.

Permit to Operate Permit No. 9341	Bay Area Air Quality Control Board tub grinder, wood debris stockpile, screen, and conveyor belt and load out operation

Appendix E contains copies of these permits.

B. Flood Plains or Tidelands

The Central Compost Site is in neither a floodplain or tideland.

C. Zoning and Agricultural Preserves

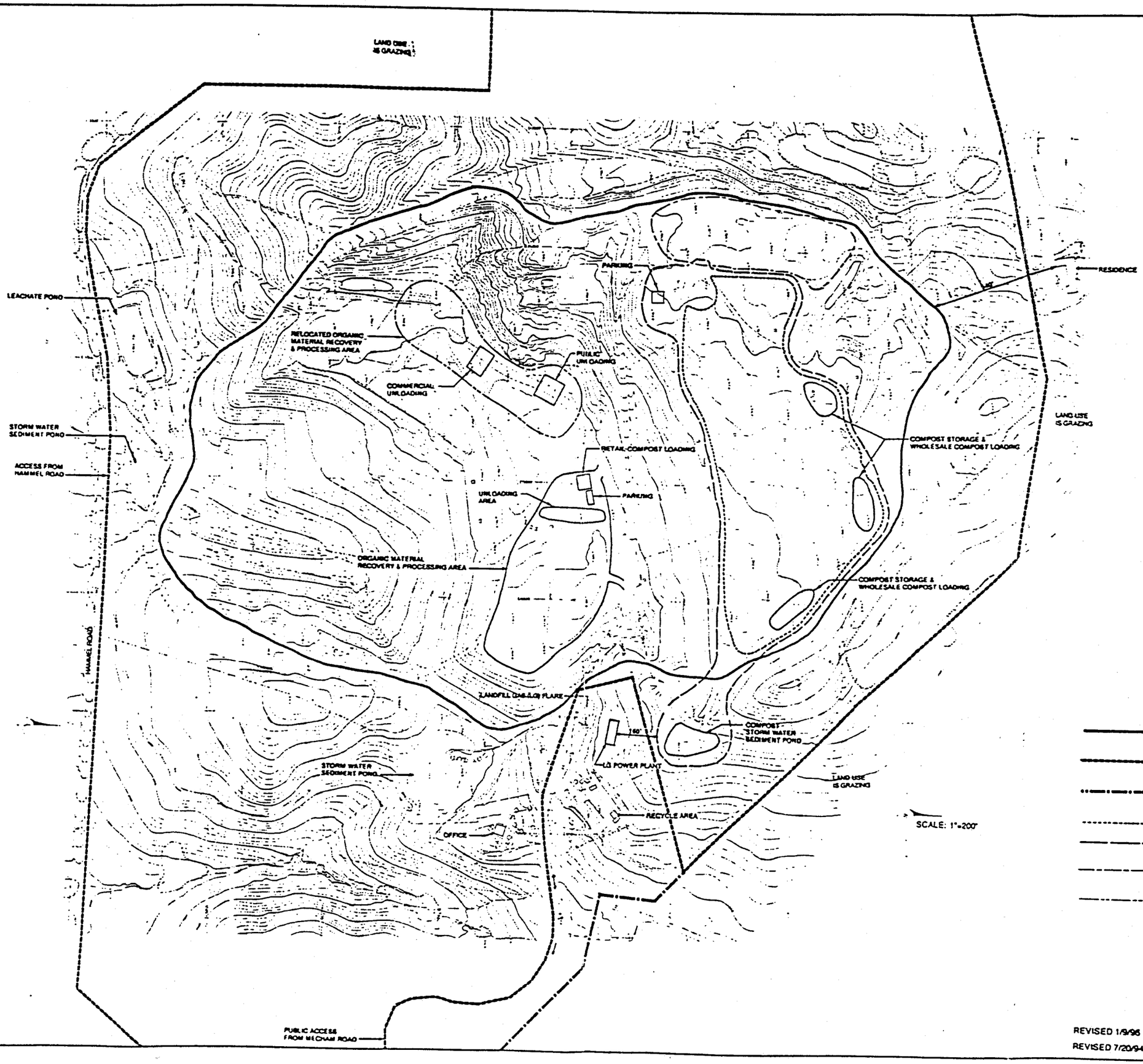
The site is designated Public/Quasi-Public in the Land Use Element of the County General Plan. The site is surrounded by land designated in the County General Plan as "Land Extensive Agriculture". The surrounding land use is grazing. The site is zoned Exclusive Agriculture. Composting at this site has been found to be consistent with the General Plan. Refer to Appendix F for copies of zoning and general plan maps.

D. Agricultural Preserve

The Central Compost Site is not within an Agricultural Preserve.

C:\WPWIN60\WPDOCS\CENTRAL\COMPOST\RCSI96.REV

ROAD NUMBER	BUDGET NUMBER	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS



REVISED 1/9/96
REVISED 7/20/94

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
EDWARD J. WALKER, DIRECTOR

CENTRAL SITE PLAN

DATE: JULY 1994 SCALE: AS SHOWN

APPENDIX B-7

Revised Medical Waste Disposal Procedures

file

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403

Edward J. Walker, Director

AREA CODE (707)

ROADS	527-2231
TRANSIT	585-7516
REFUSE	527-2231
AIRPORT	524-7243
AIR POLLUTION	433-5911
FAX	527-2620

January 5, 1998

All Permitted Medical Waste Generators and
All Licensed Solid Waste Haulers

Re: Revised Medical Waste Disposal Procedures, Sonoma County

Attached please find Refuse Bulletin No. 101 (revised January 5, 1998), PROCEDURES FOR DISPOSAL OF INFECTIOUS WASTES. This Bulletin describes new procedures to be followed for disposal of infectious wastes. These new procedures are effective immediately.

Please note that: no regulated sharps will be allowed to be disposed at any Sonoma County Disposal Site and that disposal of autoclaved infectious waste will now only be allowed at the Central Landfill during specific days and hours with prior notification.

Please contact me at (707) 792-0547 if you wish to discuss this matter.

EDWARD J. WALKER, DIRECTOR
TRANSPORTATION AND PUBLIC WORKS

Susan R. Klassen, Division Manager
Operations and Engineering

Enclosure

c: Ed Walker, Director
Dave Knight, Deputy Director
Ken Wells, Integrated Waste Manager
J.J.Krug, Director, Environmental Health Division
Bob Swift, Senior Solid Waste Specialist
Marty Isom, Solid Waste Specialist

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION
500 Mecham Road, Petaluma, CA 94952
Phone: (707)792-0547 Fax: (707)792-0416

REFUSE BULLETIN NO. 101 (REVISED: January 5, 1998)

PROCEDURE FOR DISPOSAL OF INFECTIOUS WASTES

BACKGROUND:

Current operational procedure (Bulletin No. 101 dated 2/92) for disposal of infectious wastes has proven to be ineffective in protecting disposal workers and the efficiency of the landfill operation.

PURPOSE:

It is the intent of the Sonoma County Department of Transportation and Public Works to establish a revised policy which will more effectively handle the disposal of infectious wastes on a regular and emergency basis.

LEGAL AUTHORITY:

27 CCR 20880 states that medical waste, unless treated and deemed to be solid waste, which is regulated pursuant to the "Medical Waste Management Act", Part 14, of Division 104 of the Health and Safety Code, shall not be accepted for disposal at a site. The Local Enforcement Agency is the Sonoma County Public Health Department.

PROCEDURE:

No untreated infectious waste shall be accepted at any Sonoma County Disposal Site.

No regulated sharps may be disposed of at any Sonoma County Disposal site.

No treated infectious waste will be accepted at any of the transfer stations in Sonoma County (Annapolis, Guerneville, Healdsburg, Occidental, and Sonoma).

Autoclaved infectious waste, (excluding regulated sharps), generated in Sonoma County will only be accepted at the Central Disposal site for disposal, subject to the following conditions:

1. Autoclaved Infectious waste shall only be accepted at the Central site between

8:00 a.m. and 2:00 p.m. Tuesday through Thursday.

2. Notification of planned delivery must be made 24 hours prior to disposal by contacting
Disposal Supervisor Dan Gustavsen/ Jon Steward/ Adan Alonzo at (707)792-0547.

3. In an emergency situation when autoclaved infectious waste must be disposed of outside of the days and hours allowed above and/or without 24 hours notice, written notification from the Local Health officer stating that an emergency situation does exist will be required prior to disposal. A special handling charge may be levied for this service for the cost of the labor of employees required to work during this time, pursuant to Section C.4. of the Refuse Disposal Fee Schedule. This charge is in addition to regular disposal fees.

Medical Waste Sites (annual inspection)
1996-97

Name	Address	Telephone/ Contact	Inspection
1. Pleasant Care Corp.	523 Hayes, Petaluma 94952	763-2457 Juan Perez	
2. Sonoma Valley Hospital	347 Andrieux, Sonoma 95476	935-5355 Rick Barker	
3. Kaiser Permanente	401 Bicentennial, Santa Rosa 95403	571-4356 Brad Sturz	
4. Permanente Medical	3900 Lakeville, Petaluma 94954	829-438 Roberto Khalil	
5. Palm Drive Hospital	501 Petaluma, Sebastopol 95472	829-4348 David Thibeault Dorothy Spates	
6. Sutter Medical Center	3325 Chanate, Santa Rosa 95404	576-4290 323-9175 (beeper) Larry Caldwell	
7. Memorial Hospital	1165 Montgomery Drive Santa Rosa 95405	546-3210 Dave Shaw	
8. Petaluma Valley Hospital	400 McDowell, Petaluma 94954	778-2614 Mike Gannon 778-2571 Jane Gallagher	
9. Warrack Medical Center	2449 Summerfield Rd Santa Rosa 95405	523-7171 Rebecca Callaway	
10. Healdsburg General	1375 University, Healdsburg 95448	433-4461 Gary Bilbert Scott Abrums Dan McClay	
11. Redwood Toxicology Lab	3573 Westwind Boulevard Santa Rosa 95403	577-7959 Robert Mount Michelle	
12. Redwood Regional Oncology Center	3555 Round Barn Blvd Suite 100, Santa Rosa 95403	525-3890 493-0785 (pager) Gordon Tidd	
13. CareWest-Petaluma	1115 B, Petaluma 94952	765-3030 Sean Wood Dave Morgan	

14. Heart of Sonoma	1250 Broadway, Sonoma 95476	938-8406 Herb Roukey
15.CareWest-Manzanita	300 Cherry Creek, Cloverdale 95425	894-5201 Robert Loughry
16. Satellite Dialysis	1255 N Dutton, Ave Santa Rosa 95401	526-0717 Richard Schoellhorn
17. BMA of Santa Rosa (Biomedical application)	1739 4th Street, Santa Rosa 95404	527-5350 Dean Sweetland
18. London House	4650 Hoen, Ave Santa Rosa 95405	546-0471 Pat Francis
19. London House	678 2nd W. St., Sonoma 95476	938-1096 Lauren Danning George Graff
20. Apria Health Care	3636 N. Laughlin Road Suite 190, Santa Rosa 95403	543-5822 544-6534 Gary Dennis
21. BMA of Petaluma	141 Lynch Creek, Way Petaluma 94954	765-1060 Meg Sweetland
22. Rohnert Park Health Care	1450 Medical Center Drive Rohnert Park 94928	584-0672 Pat Batooshing
23. Montgomery Manor	3751 Montgomery Drive Santa Rosa 95405	525-1250 Judy Bates
24. Creekside	850 Sonoma, Ave Santa Rosa 95404	544-7750 Ted Mathews
25. Unilab	1111 Sonoma, Ave Santa Rosa 95405	528-2828 Sharon Hildebrand
26. Blood Bank of The Redwoods	2324 Bethards, Santa Rosa 95405	545-1222 Trish & Devon Scott-Montrose
27. North Coast Rehab	151 Sotoyome, Santa Rosa 95405	542-2777 543-2550 973-1021 - beeper Jeff McCleeary

Medical Waste Sites (biannual)
1996-97

Name	Address	Telephone/ Contact	Inspection
1. Sonoma Developmental Center	1500 Arnold, Sonoma 95476	938-6456 George Ely Sheri Cotie 938-6401 Ron Johnson	
2. Sonoma State University	1801 Cotati, Rohnert Park 94928	664-2932 Helen Snyder	
3. U. S. Coast Guard Training Center	599 Tomales, Rd Petaluma 94952	765-7200 Brandon Cutting	
4. S. R. Convalescent Hosp	446 Arrowood, Dr Santa Rosa 95407	528-2100 Mark Pedrazetti Mrs. McCoy	
5. Alliance Medical Center	621 Center St, Healdsburg 95448	433-5494 Eva	
6. Occidental Area Health Ctr	3802 Main St, Occidental 95465	874-2444 Margarita	
7. Russian River Health	16319 3rd St, Guerneville 95446	869-2849 Sonny Gazza	
8. Archambeau, Paul, M.D.	380 Tesconi, Ct. Santa Rosa 95401	544-3375 Marcia Eldredge	
9. Nicholas Turkey Breeding	1777 Watmaugh, Sonoma 95476	938-1111 Mark Bland, DVM	
10. David, Francis, D.D.S.	4655 Hoen, Ave Santa Rosa 95405	545-7575 Lynne Lowe	
11. Public Health Laboratory	3313 Chanate, Rd Santa Rosa 95404	575-4711 David Yong, M.D. Russell	
12. Arterial Vascular Engineering (A.V.E.)	3576 Unocal Place SR 95403	541-3287 John Koose	
~~12. A.V.E.~~	~~5355 Skylane Blvd, Santa Rosa 95403~~	~~541-3287 John Koose~~	
14. Gateway Dental Office	5755 Redwood Drive ~~Santa Rosa~~ RP 94928	584-1000 Lori Wood	

PLEASANT CARE CORP.
JUAN PEREZ
523 HAYES
PETALUMA, CA 94952

PERMANENTE MEDICAL
ROBERTO KHALIL
3900 LAKEVILLE HWY.
PETALUMA, CA 94954

MEMORIAL HOSPITAL
DAVE SHAW
1165 MONTGOMERY DRIVE
SANTA ROSA, CA 95405

HEALDSBURG GENERAL
GARY BILBERT
1375 UNIVERSITY
HEALDSBURG, CA 95448

CARE WEST-PETALUMA
SEAN WOOD
1115 B ST.
PETALUMA, CA 94952

SATELLITE DIALYSIS
RICHARD SCHOELLHORN
1255 N. DUTTON AVE
SANTA ROSA, CA 95401

LONDON HOUSE
LAUREN DANNING
678 2ND W. ST.
SONOMA, CA 95476

ROHNERT PARK HEALTH CARE
PAT BATOOSHING
1450 MEDICAL CENTER DRIVE
ROHNERT PARK, CA 94928

UNILAB
SHARON HILDEBRAND
1111 SONOMA AVE
SANTA ROSA, CA 95405

SONOMA DEVELOPMENTAL
GEORGE ELY
1500 ARNOLD DRIVE
SONOMA, CA 95476

SONOMA VALLEY HOSPITAL
RICK BARKER
347 ANDRIEUX
SONOMA, CA 95476

PALM DRIVE HOSPITAL
DAVID THIBEAULT
501 PETALUMA
SEBASTOPOL, CA 95472

PETALUMA VALLEY HOSPITAL
MIKE GANNON
400 MC DOWELL
PETALUMA, CA 94954

REDWOOD TOXICOLOGY LAB
ROBERT MOUNT
3573 WESTWIND BLVD.
SANTA ROSA, CA 95403

HEART OF SONOMA
HERB ROUKEY
1250 BROADWAY
SONOMA, CA 95476

BMA OF SANTA ROSA
DEAN SWEETLAND
1739 4TH ST.
SANTA ROSA, CA 95404

APRIA HEALTH CARE
GARY DENNIS
3636 N. LAUGHLIN ROAD,
STE. 190
SANTA ROSA, CA 95403

MONTGOMERY MANOR
JUDY BATES
3751 MONTGOMERY DRIVE
SANTA ROSA, CA 95405

BLOOD BANK OF THE
REDWOODS
SCOTT-MONTROSE
2324 BETRHARDS
SANTA ROSA, CA 95405

SONOMA STATE UNIVERSITY
HELEN SNYDER
1801 E. COTATI AVE.
ROHNERT PARK, CA 94928

KAISER PERMANENTE
BRAD STURZ
401 BICENTENNIAL
SANTA ROSA, CA 95403

SUTTER MEDICAL CENTER
LARRY CALDWELL
3325 CHANATE
SANTA ROSA, CA 95404

WARRACK MEDIAL CENTER
REBECCA CALLAWAY
2449 SUMMERFIELD ROAD
SANTA ROSA, CA 95405

REDWOOD REGIONAL
ONCOLOGY CENTER
GORDON TIDD
3555 ROUND BARN, STE. 100
SANTA ROSA, CA 95403

CARE WEST-MANZANITA
ROBERT LOUGHRY
300 CHERRY CREEK
CLOVERDALE, CA 95425

LONDON HOUSE
PAT FRANCIS
4650 HOEN AVE.
SANTA ROSA, CA 95405

BMA OF PETALUMA
MEG SWEETLAND
141 LYNCH CREEK WAY
PETALUMA, CA 94954

CREEKSIDE
TED MATHEWS
850 SONOMA AVE
SANTA ROSA, CA 95404

NORTH COAST REHAB
JEFF MC CLEEARY
151 SOTOYOME
SANTA ROSA, CA 95405

U.S. COAST GUARD
BRANDON CUTTING
599 TOMALES ROAD
PETALUMA, CA 94952

SANTA ROSA CONVALESCENT
MARK PEDRAZETTI
446 ARROWOOD DR.
SANTA ROSA, CA 95407

RUSSIAN RIVER HEALTH
SONNY GAZZA
16319 3RD ST.
GUERNEVILLE, CA 95446

DAVID FRANCIS D.D.S.
LYNNE LOWE
4655 HOEN AVE.
SANTA ROSA, CA 95405

A.V.E.
JOHN KOOSE
5355 SKYLANE BLVD
SANTA ROSA, CA 95403

ALLIANCE MEDICAL CENTER
EVA
621 CENTER ST.
HEALDSBURG, CA 95448

PAUL ARCHANDBEAU M.D.
MARCIA ELDREDGE
380 TESCONI COURT
SANTA ROSA, CA 95401

PUBLIC HEALTH LABORATORY
3313 CHANATE ROAD
SANTA ROSA, CA 95404

GATEWAY DENTAL OFFICE
LORI WOOD
5755 REDWOOD DRIVE
ROHNERT PARK, CA 94928

OCCIDENTAL AREA HEALTH CENTER
MARGARITA
3802 MAIN ST.
OCCIDENTAL, CA 95465

NICHOLAS TURKEY BREEDING
MARK BLAND, DVM
1777 WATMAUGH
SONOMA, CA 95476

ARTERIAL VASCULAR ENG.
JOHN KOOSE
3576 UNOCAL PLACE
SANTA ROSA, CA 95403

FAX TRANSMISSION

Sonoma County Department of Transportation and Public Works
Integrated Waste Division - Operations Headquarters
500 Mecham Road
Petaluma, CA 94952
707-792-0547
707-792-0416 (fax)

To: Kelly - Empire Waste

Date: 2/3/98

Fax # 586-1930

Pages: 4
(including this cover sheet)

From: Susan Klassen

Subject: Mailing List

Comments:

Copy of mailing list of Medical Waste Generators who received Jan 5, 1998 letter and Revised Bulletin 101

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES

Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

January 21, 1998

MAIL-BACK SERVICES APPROVED BY THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

- Browning-Ferris Industries (BFI) Medical Systems and Becton Dickinson Mail Disposal Service (800) 345-2362
- Integrated Environmental System, Inc.-Sharps mail-back system (510) 261-1512 or (800) 292-7837
- MedWaste Disposal Services "Enviro-Safety"-Sharps mail-back system (707) 263-7524 or (800) 233-3887
- OnGard System, Inc.-Sharps mail-back system (800) 878-8111
- Safe-T-Med, Inc.-Sharps mail-back system 800) 723-3863
- Sharps Compliance, Inc.-3CI Mail Sharps Disposal System (800) 772-5657
- Sharps Disposal, Inc.-Sharps mail-back service (800) 527-0666
- Sericycle, Inc.-Sharps mail-back service (800) 755-3291
- Ventura Waste Management-Sharps mail-back service (805) 647-2541 or (800) 952-2909
- WMI Medical Waste Services of North Carolina, Inc.-Sharps mail-back service This system is for sharps waste only and is available through local medical supply houses.
- Empire Waste Management-Michael Gianetti (707) 586-8266

For additional information on requirements for use of these mail-back service, contact your local health or environmental health agency, or the California Department of Health Services, Medical Waste Management Program at (916) 327-6904

Post-it® Fax Note 7671
Date 1/23/98 # of pages ▶ 2
To Joyce Welch
From Marty Isom
Co./Dept.
Co.
Phone #
Phone # 525-6568
Fax #
Fax #

MEDICAL WASTE TRANSPORTER LIST

All Chemical Disposal, Inc.
941 D Berryessa Road
San Jose, CA 95133
(408)453-1660

Barnett Surgical Supply Co.
181 Mayhew Way, No., E.
Walnut Creek, CA 94596
(510)943-7164

BFI Medical Waste Systems
3326 Fitzgerald Road
Rancho Cordova, CA 95742
(916)364-8872
(1-800)345-2362

California AETC
4227 Technical Drive
Fremont, CA 94538
(510)651-2964

Caltec Environmental, Inc.
1100 Lincoln Avenue, #108
Napa, CA 94558
(707)257-3564

Erickson, Inc.
255 Parr Blvd.
Richmond, CA 94001
(510)235-1393

Integrated Environmental Sys.
499 High Street
Oakland, CA 94601
(510)261-1512

Integrated Waste Control
69 Crescent Street
Sausalito, CA 94965
(415)331-3446

Koefran Industries
11350 Kiefer Blvd.
Sacramento, CA 95830
(916)361-0911
(1-800)822-6768
FAX (916)363-4835

Med Tec
1239 McCartney Lane
McKinleyville, CA 95521
(707)839-5544

Medwaste Disposal Sev.
3838 Hill Road
Lakeport, CA 95453
(707)263-7524
(1-800)233-3887

Morgan Environmental
1091 Calcot Place
Oakland, CA 94606
(510)533-2001

Ramos Environmental
1515 South River Road
West Sacromento, CA
95691 (916)371-5747

Safeline Corporation
3080 Lawrence Expressway
Santa Clara, CA 95051
(408)733-8655

LABEL SUPPLY COMPANIES

Brenton Safety Inc.
242 Shaw Road
So.San Francisco,CA
94080 FAX (415)871-9882
(415)873-4333

BWS Distributors Inc.
1847 Piner Road
Santa Rosa, CA 95403
(707)546-2484

(FAX)707)546-4804

Inclusion on this list does not represent an endorsement of any company by the County of Sonoma. It is recommended that the waste generator thoroughly investigate a company before offering medical waste for shipment.

The Department of Toxic Substances control phone number that may be used to check on the current status of medical waste haulers: (916)327-6904

rev 2/96

DATE: October 28, 1998

TO: Refuse Division and Environmental Health Staff

FROM: David Knight, Deputy Director, Department of Transportation and Public Works
J. J. Krug, Director of Environmental Health

SUBJECT: Procedure for Handling Hospital-Generated Medical Waste at the County Landfill

The following process is intended to define responsibilities and duties in light of the recent Board of Supervisors' directive approved September 22, 1998. The landfill will continue to allow disposal of treated medical waste subject to the following directives and assigned tasks:

1. Delivery to Landfill:

   a. All hospital deliveries by haulers of all waste types will be prescheduled 24 hours in advance by the respective hauler on a Tuesday or Wednesday between 8:00 a.m. and 2:00 p.m. Deliveries on any other days of the week will not be accepted.

   b. Effective December 1, 1998, all hospital loads shall have red bags containing treated medical waste and clear bags for all other waste. At a date determined by the Medical Waste Advisory Committee, each bag will have the name of the hospital legibly and permanently labeled on each bag for identification purposes.

   c. Hauler shall provide certificate of origin and sterilization from hospitals for each scheduled medical waste load.

2. Inspection of Deliveries:

   a. The Refuse Division will continue to inspect every hospital delivery and random load inspection of all other commercial and self-haul deliveries to the landfill. We are hopeful that new Sani-Pak technology or inspections by the hospitals will eliminate the need for inspection of hospital waste loads at the landfill.

   b. Load inspections will only be performed by trained and qualified personnel. Any suspected violation of the Medical Waste Management Act (MWMA) or the County's sharps policy shall be immediately referred to the Refuse Engineering Division Manager or their designee for evaluation. County Environmental Health will be called to verify the

violation of MWMA. If there is a violation, the Refuse Engineering Division Manager or their designee shall isolate the area where the load resides and notify the Deputy Director of Department of Transportation and Public Works and the Director of Environmental Health, along with the designated hospital representative, of the intent to reject the contaminated load.

Criteria for evaluating rejection will be based on the text of the MWMA of April 1, 1991, and amendments, and the County of Sonoma Integrated Waste Division Procedure for Disposal of Infectious Waste (sharps policy) issued January 5, 1998.

c. Each load suspected of containing untreated medical waste will have visual and written documentation by Refuse and Environmental Health staff. Environmental Health may retain a sample of the material in question.

3. Rejection of Contaminated Load:

After Environmental Health has verified a medical waste disposal violation of the MWMA, the Refuse Engineering Division Manager or his designee shall reject the load. Or if a County sharps' policy violation has been verified, the Refuse Engineering Division Manager or their designee shall reject the load.

4. Treatment of Violation:

Once the decision to reject a load is made, the following steps will be followed:

a. The hospital will be contacted by Refuse Division staff to perform cleanup and removal of a rejected load. All cleanup and removal will be performed by a licensed hauler immediately and the generator shall assume full responsibility and expense. If not removed within 24 hours of delivery to the site, said generator shall be banned from the site for one year subject to appeal to Board of Supervisors and billed for all cleanup expenses incurred by the County. Failure by violator to pay for cleanup will result in a permanent ban. The generator shall pay all expenses incurred by the County in association with any cleanup activities. Refuse Division staff will send the generator a certified letter prohibiting the generator from delivery of any waste to the landfill for 90 calendar days beginning the day of rejection determination. Refuse Division staff will also notify the California Highway Patrol of the incident.

b. Environmental Health will:

- Take administrative action, as appropriate, such as issuing an order for compliance and/or imposing an administrative penalty.
- Refer violation to District Attorney to pursue civil action or criminal prosecution for any hospital that violates an order for compliance after the notice and an opportunity for hearing.

- Immediately inspect and investigate the generator's waste handling site, practices and operations.

c. Repeat Violators:

Within a one-year period of time following first 90-day denial of waste acceptance at the landfill the following penalties in addition to other expenses shall be imposed:

Violation	Suspension Period From Date of Violation
Second Occurrence	180 calendar days/Suspension of disposal privileges at the County refuse disposal sites.
Third Occurrence	Permanent/Suspension of disposal privileges at the County refuse disposal sites.

This procedure is effective immediately and subject to change at the County's discretion.

A procedure for other medical waste generators is under development.

cc: All Haulers
All Hospitals
Board of Supervisors

i:\misc\knight\medwsteproc\October 28, 1998:mjt

APPENDIX B-8

Landfill Procedure for Handling and Disposing of Contaminated Soils

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Integrated Waste Division Operations
500 Mecham Road, Petaluma, Ca. 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Richard W. Doble, PE,PLS
Operation Manager

Refuse Bulletin No. 100 (revised August 1994)

LANDFILL PROCEDURE FOR HANDLING AND DISPOSING OF CONTAMINATED SOILS

The Sonoma County Central Landfill at 500 Mecham Road is permitted as a Class III landfill and will not accept waste which is defined as hazardous by RCRA and /or CCR Title 22.

The Sonoma County Central Landfill will however accept non-hazardous petroleum contaminated soil which has been properly sampled, analyzed and found to be acceptable for disposal in a Class III landfill.

Acceptance is based on the County's determination that all necessary documentaion of testing results, origin, location of sampling and other required information has been submitted, reviewed and approved.

The County of Sonoma reserves the right to reject any and all soil from disposal at County Landfills without cause.

Required Information;

1) Amount of soil to be disposed measured in cubic yards.
2) Plot plan with location of where samples were taken, location and disposition of soil, eg; in situ, stock pile, containers, others.
3) Site address, APN and owners name and address.
4) All laboratory results by a commercial laboratory certified by the State of California
5) Chain of Custody Documents
6) All data submitted must be less than one (1) year old and on certifying laboratory's letterhead.
8) The source and matrix of the waste sample must be identified on report.
9) The results must identify units of measure

Sample collection and and analyses:

Sample collection and analyses must be performed in accordance with designated EPA procedures and methods. Laboratory sampling must be representative samples; a representative sample is defined as a sample which can be expected to exhibit the average properties of the contaminated materials being tested.

It is the sole responsibility of the owner/generator to characterize the waste as non-hazardous pursuant to Federal, State and Local regulations. Sonoma County requires waste characterization for landfill accertability and will not assume responsibility for such characterization.

Required Analytical Data:

Predisposal testing requirements for soil	Analyses
	RCI (Reactivity, Corrosivity, Ignitability)
	TPH (Total petroluem hydrocarbons)
	*8240-TCLP (BTEX)
	8270-TCLP (Phenol)
	8080-TCLP (PCB'S)
	CAM 17

RCI analyses is used to determine whether or not a waste exhibits any hazardous characteristics as defined by 40 CFR parts 261.21, 261.22 and 261.23 and Title 22 CCR, article 11.

BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes) analyses are required when characterizing petroleum contaminated soils.

* Soils contaminated with waste oils or other unknown hydrocarbons should be analyzed for Volatile Organic Compounds (VOC) Method No 8240,8270 and (STLC, TTLC) Cam 17 (The Waste Extraction Test (Wet) for California Assessment Metals).

one (1) composite of four samples every 100 cubic yards maximum for TPH BTEX and inorganic lead.

One (1) composite of four samples every 500 cubic yards maximum for (TTLC,STLC) CAM 17, 8240, 8270, 8080

One (1) RCI anaylses representative of total cubic yards to be disposed.

** Frequency of sampling may vary based on site specific information.

Acceptance Criteria :

Organic Constituents:

Total Petroleum Hydrocarbons

Gasoline	50 ppm (mg/kg)	Diesel, Oil and Grease	100 ppm (mg/kg)

BTEX

	Gasoline	Diesel, Oil and Grease
Benzene	0.01 ppm	0.01 ppm
Toluene	15.0 ppm	15.0 ppm

Ethylbenzene	15.0 ppm	15.0 ppm
Xylenes	15.0 ppm	15.0 ppm
Organic lead	13.0 ppm	

RCI (Reactivity, Corrosivity, Ignitability)

Reactivity: Non Reactive

Sulfide < 100 mg/kg

Cyanide < 10 mg/kg

Corrosivity: PH range: 5 to 10

Ignitability: Flashpoint: > 140 deg F, or 60 deg Celsius

California Assessment Metals 17
Per Title 22 CCR (STLC, TTLC)

Inorganic constituents:

ANALYTE	STLC mg/L LIMIT	TTLC mg/kg LIMIT
Antimony	15	500
Arsenic	5	500
Asbestos		10,000
Barium	100	10,000
Beryllium	0.75	75
Cadmium	1	100
Chromium (VI)	5	500
Chromium (III)	560	2,500
Cobalt	80	8,000
Copper	25	2,500
Fluoride	180	18,000
Lead	5	1,000
Mercury	0.2	20
Molybdenum	350	3,500
Nickel	20	2,000
Selenium	1	100
Silver	5	500
Thallium	7	700
Vanadium	24	2,400
Zinc	250	5,000

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
Integrated Waste Division Operations
500 Mecham Road, Petaluma, CA 94952
Telephone (707) 792-0547 Fax (707) 792-0416

Susan R. Klassen
Division Manager
Engineering and Operations

APPLICATION TO DISPOSE OF SOIL

I. Soil Generator:

Name, Co., Corp._____

Address_____City_____Zip_____

II. Soil Location:

Site Address_____City_____Zip_____

Assessors Parcel Number_____

III. Soil Disposition:

Quantity to be disposed_____Cubic Yards.

wet____dry_____mixed_____stockpile_____drum_____In Situ_____other_____

_____

The County of Sonoma accepts uncontaminated soil at its landfill sites between May and September each year. Before any soil is disposed of it must be tested for contamination of hazardous waste as defined by RCRA and/or Title 22 CCR.

Results of tests and all required information pursuant to Refuse Bulletin No. 100 (revised August 1994) should be attached to this application and mailed to the above address for processing; you will be notified of the acceptability of the soil by mail within about two (2) weeks.

I certify that all information submitted herewith is truly representative of the above described soil and agree to hold the County of Sonoma harmless from any claim, liability, damage, or expense including attorneys' fees arising out of any violation or untruth of any of the information submitted.

_____
Printed Name

_____
Signature of Generator

Substance	Per Title 22 CCR (mg/l) STLC Limit	Per Title 22 CCR (mg/kg) TTLC Limit	Reporting Limit (mg/kg)	Method
Cadmium	1	100	0.5	EPA 6010
Chromium (VI)	5	500	0.1	EPA 7196
Chromium (III)	560	2,500	1	EPA 6010
Cobalt	80	8,000	1	EPA 6010
Copper	25	2,500	1	EPA 6010
Lead	5	1,000	4	EPA 7421
Mercury	0.2	20	0.02	EPA 7471
Molybdenum	350	3,500	2	EPA 6010
Nickel	20	2,000	3	EPA 6010
Selenium	1	100	0.5	EPA 7740
Silver	5	500	1	EPA 6010
Thallium	7	700	5	EPA 6010
Vanadium	24	2,400	2	EPA 6010
Zinc	250	5,000	2	EPA 6010

APPENDIX B-9

Posi-Shell Alternative Daily Cover

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES
Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

May 20, 2002

Mr. Scott Walker, Branch Manager
California Integrated Waste Management Board
Permitting and Enforcement Division
Remediation Closure and Technical Services Branch
P.O. Box 4025
Sacramento CA 95812-4025

Re: Use of Posi-Shell as an Alternative Daily Cover (ADC) at the Central Disposal Site (49-AA-0001)

Dear Mr. Walker:

The Department of Transportation and Public Works (DTPW), as the operator of the Central Disposal Site, wishes to receive agency approval of Posi-Shell as an ADC, with conditions. Please note the following chronology:

February, 1999 -	The DTPW proposed a demonstration project for the use of Posi-Shell as an ADC.
May, 1999 -	The Local Enforcement Agency (LEA), Regional Water Quality Control Board (RWQCB), and Air Quality Management District (AQMD) approved the initiation of the demonstration project, with conditions.
August, 2001 -	The DTPW submitted a Final Report on the Posi-Shell Demonstration Project. Also, in a letter to you, I recommended conditional approval for the use of Posi-Shell as an ADC.

The DTPW now wishes to apply for a JTD amendment or if necessary, a SWF permit revision, to allow continued use of Posi-Shell as an ADC, in accordance with LEA conditions for approval. Our conditions for approval are as follows:

1. The POSDEF fly ash, or any other mineral binder used in the Posi-Shell ADC formulation, shall meet the Title 22 California Code of Regulations Chapter 11 Identification and Listing of Hazardous Waste criteria for acceptance at the Central Disposal Site. Although the POSDEF fly ash meets the 22CCR 66261.22 Characteristic of Corrosivity Standard, the PH is greater than 10, which exceeds the Central Disposal Site internal acceptance criteria (Refuse Bulletin No 116-Procedure for Handling and Disposing of Special Waste). As noted in the RWQCB May 4, 1999 correspondence, "Onsite use of this product must not contribute to violation of the Basin Plan objectives for pH range of 6.5 to 8.5 for any runoff events."

2. Posi-Shell shall be used as an ADC only.

3. The use of leachate as the liquid fraction of the Posi-Shell ADC formulation shall be prohibited.

4. Contingency soil or other approved ADC stockpiles shall be maintained.

5. Use of Posi-Shell shall be prohibited within 24 hours in advance of a National Weather Service Forecast of a 30% chance of rainfall event.

6. Posi-Shell exposure to the elements shall be limited to 7 days. Soil, reapplication of Posi-Shell or other approved ADC, or placement of a refuse daily cell shall be required after 7 days exposure to the elements or earlier, if warranted.

7. Application of Posi-Shell ADC shall be of sufficient thickness to control vectors, fires, blowing litter, and scavenging without presenting a threat to human health, safety or the environment.

As indicated earlier, the DTPW wishes to amend the JTD, or if necessary, revise the SWFP to allow continued use of Posi-Shell as an ADC, in accordance with LEA conditions for approval.

I would appreciate your thoughts on this matter. If you should have any questions, please call me at (707) 565-6546.

Sincerely,

Robert A. Swift, R.E.H.S.
Senior Environmental Health Specialist

RAS:cad

cc: Jeff Lewin, EH
Erica Weber, CIWMB
Terri Kinney, RWQCB
Susan Klassen, DTPW
Don Poindexter, DTPW
Randy Forbes, DTPW

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES

Mark A. Kostielney - Director

Environmental Health Division
Jonathan J. Krug - Director

RECEIVED
2001 AUG 16 P 12:30
SONOMA COUNTY DEPT. OF PUBLIC WORKS

August 15, 2001

Mr. Scott Walker
California Integrated Waste Management Board
Permitting and Enforcement Division
Remediation, Closure, and Technical Services Branch
P. O. Box 4025
Sacramento, CA 95812-4025

RE: Posi-Shell Alternative Daily Cover (ADC) Demonstration Project at the Central Disposal Site (49-AA-0001)

Dear Mr. Walker:

We have concluded our review of the Posi-Shell ADC demonstration project at the Central Disposal site. Enclosed please find this department's Final Report.

With adequate thickness of application, wet weather restrictions, and exposure to the elements limitations, it appears that Posi-Shell ADC can, with conditions, control vectors, fires, odors, blowing litter and scavenging without presenting a threat to human health and the environment, in accordance with 27CCR20690 ADC general requirements.

The demonstration project time frame has ended. Please be advised that all RWQCB requirements, as noted in Ms. Terri Kinney's letter of May 4, 1999, need to be met prior to continued use of this product. Of immediate and foremost concern, the operator is required to demonstrate that the POSDEF fly ash, or any other mineral binder, meets the 27CCR20705(e)(1) waste classification criteria for wastes that can be discharged at the Central Disposal Site.

In the event, and until such time that the RWQCB should allow the use of Posi-Shell ADC at the Central Disposal Site, this agency would recommend approval with the following conditions:

1. Application for a Joint Technical Document (JTD) amendment, submitted to both the RWQCB and LEA, would be required.

2. Approval of Posi-Shell would be for use as an ADC only.

3. Use of leachate as the liquid fraction would not be allowed.

3273 Airway Dr., Ste. D, Santa Rosa, CA 95403-2097 • *phone* (707) 565-6565 • *fax* (707) 565-6525 • www.sonoma-county.org

4. Maintenance of contingency soil stockpiles would be required.

5. Use of Posi-Shell would be prohibited within 24 hours in advance of a National Weather Service Forecast of a 30% chance of rainfall event.

6. Posi-Shell exposure to the elements would be limited to 7 days. Soil, reapplication of Posi-Shell or other ADC, or placement of a refuse daily cell would be required after 7 days exposure or earlier, if warranted.

7. Application of sufficient thickness to control vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment would be required.

8. Assurance of compliance with any and all RWQCB conditions for use would be required.

Please do not hesitate to contact me at (707) 565-6546 if you should have any questions.

Sincerely,

Robert A. Swift, R.E.H.S.
Senior Environmental Health Specialist

RAS:esa

Enclosure

cc: Terri Kinney, RWQCB, w/ enc.
Erica Weber, CIWMB. w/enc
Susan Klassen, PW, w/enc.
Don Poindexter, PW
Gary Thomas, LSC, w/enc.
Jeff Lewin, EH

California Integrated Waste Management Board

Linda Moulton-Patterson, Chair
1001 I Street • Sacramento, California 95814 • (916) 341-6000
Mailing Address: P. O. Box 4025, Sacramento, CA 95812-4025
www.ciwmb.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

RECEIVED
2002 AUG 12 P 1:34
SONOMA COUNTY DEPT. OF PUBLIC WORKS

AUG 08 2002

Jonathon J. Krug, Director
Santa Rosa Environmental Health Department
3273 Airway Drive, Suite D
Santa Rosa, CA 95403-2067

RE: Posi-Shell ADC Demonstration Project Final Report, Central Disposal Site, Facility No. 49-AA-0001

Dear Mr. Krug:

This letter provides California Integrated Waste Management Board (CIWMB) concurrence with Solid Waste Local Enforcement Agency (LEA) approval of the subject Alternative Daily Cover (ADC) demonstration final report dated August 2001. The LEA approval and request for concurrence is dated May 20, 2002. CIWMB concurrence is provided as requested pursuant to Title 27, California Code of Regulations (27 CCR), section 20700(b) and LEA Advisory No. 48.

The ADC project tested a non-combustible blend of recycled materials (water, recycled plastic & cellulose fibers, and a mineral binder) that provide a thin (≤ ¼ inch) cover that is sprayed over the working face, hardening to a stucco-like coating that provides vector, odor, fire, and litter control. CIWMB staff note that the principal benefit of this ADC was conservation of landfill space.

If you have any questions, please contact Mark de Bie at (916) 341-6338.

Sincerely,

Scott Walker
Acting Deputy Director
Permitting and Enforcement Division

cc: Ms. Susan Klassen- Public Works
575 Administration Drive, Room 117A
Santa Rosa, CA 95403

APPENDIX B-10

Leachate Monitoring Results

EBA WASTECHNOLOGIES
Engineers & Environmental Consultants

December 28, 1998

Mr. Don Poindexter
County of Sonoma
Department of Transportation and Public Works
575 Administration Drive, Room 117A
Santa Rosa, CA 95403

RE: Leachate Monitoring for Wastewater Discharge Permit - November 1998
Central Landfill - Petaluma, California
EBA Project No. 98-640 (Task 14)

Dear Mr. Poindexter:

Enclosed please find the results of leachate sampling at the Central Landfill in Petaluma, California. The sampling was performed for permit compliance with the Santa Rosa Subregional Wastewater Management System - Critical Parameters Report. The samples were collected on November 17, 1998 by EBA personnel from the outlet of the Treatment Plant (Treatment Plant Effluent) and a composite sample was collected from the leachate storage pond. These sampling locations are approximately 200 feet west of monitoring well MW-3R. Please refer to Figure 1-Site Map enclosed in Appendix A. The samples were collected in laboratory supplied containers and placed under refrigerated conditions pending transport under Chain-of-Custody procedures to Alpha Analytical Laboratories for the requested analyses. The analytical results have been tabulated and are presented in Appendix B. The Certified Analytical Report is presented in Appendix C.

EBA appreciates the opportunity to be of service to the County on this project. If you should have any questions regarding the information contained herein, please do not hesitate to contact our office at (707) 544-0784.

Very truly yours,
EBA WASTECHNOLOGIES

Duane Butler

Duane Butler, C.E., P.E. #13357
R.E.A. #01999

REGISTERED PROFESSIONAL ENGINEER
No. 13357
Exp 3/31/01
CIVIL
State of California

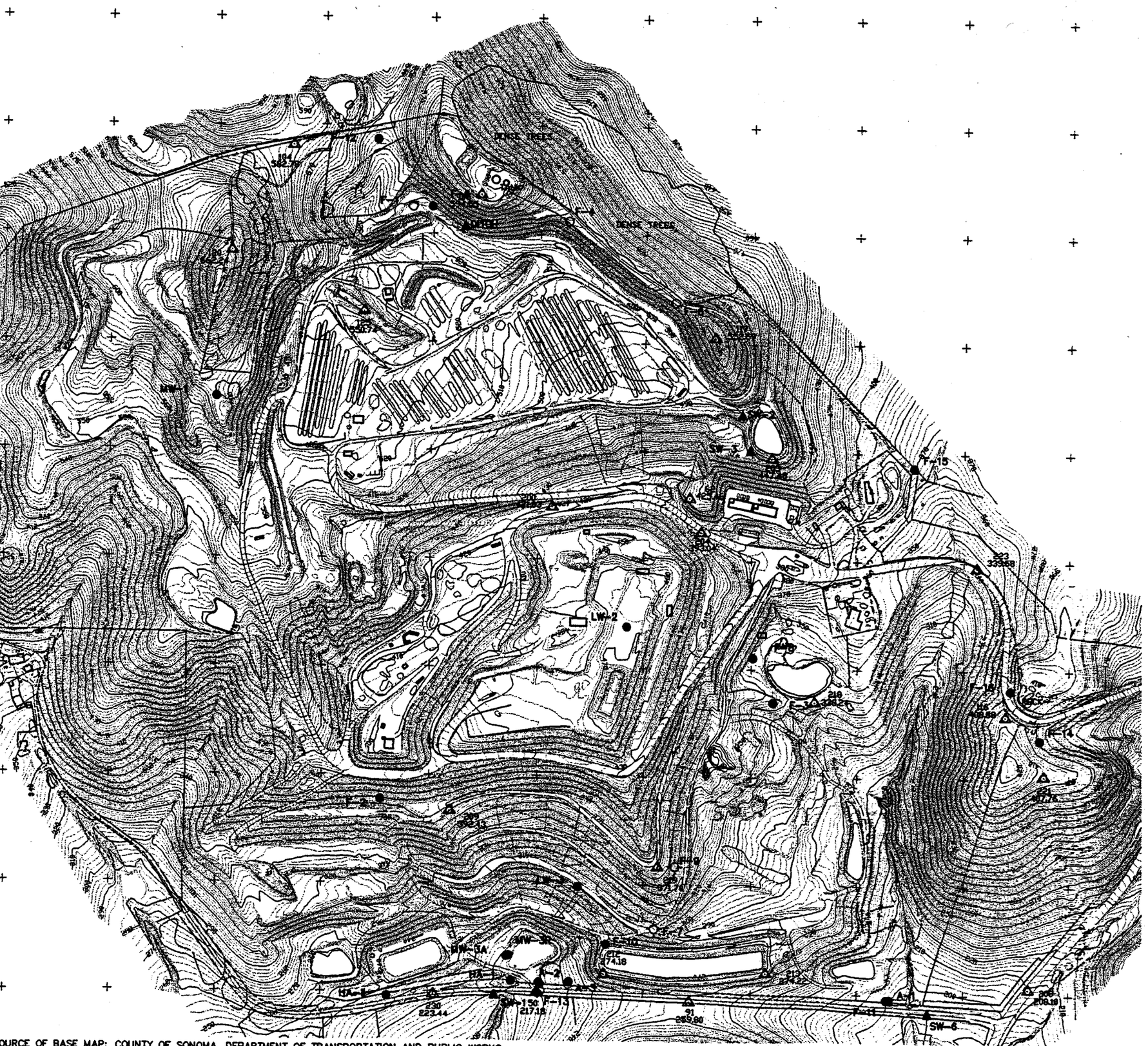
Enc: Leachate Sampling Results - November 1998

L:\PROJECT\640\CENTRAL\REPORTS\LEACHATE.RPT\CE1198CV.LTR

825 Sonoma Avenue, Suite C Santa Rosa, California 95404 (707) 544-0784 FAX (707) 544-0866
225 W. Hospitality Lane, Suite 200 San Bernardino, CA 92408 (909) 890-0432 FAX (909) 890-0422
www.ebawaste.com e-mail: info@ebawaste.com

APPENDIX A

FIGURES



LEGEND

270	TOPOGRAPHIC ELEVATION CONTOUR (FEET)
SW-1 ▲	SURFACE WATER STATION
LW-1 ●	GROUNDWATER MONITORING WELL
A-1 ●	LEACHATE MONITORING WELL
F-1 ○	PIEZOMETER LOCATION
F-9 ⊕	SEALED EXPLORATORY BOREHOLE FOR PROPOSED MONITORING WELL LOCATION

NOTES:

WELL LOCATIONS ARE DERIVED FROM COUNTY BASE MAP AND "DATA REPORT INSTALLATION OF MONITORING WELLS (DRAWING NO. 2-1)" PREPARED BY THE MARK GROUP, INC. (DECEMBER 14, 1995)

ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL

N

0 125 250 500

1" = 500'

SOURCE OF BASE MAP: COUNTY OF SONOMA, DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

XREF: Q:\98-640\CENTRAL\97TOPO.DWG

FIGURE 1

DEC 1998
5&2\CENTRAL\
97SITEMP.DWG

CENTRAL SITE
SONOMA COUNTY, CALIFORNIA

SITE MAP

EBA

APPENDIX B

TABULATED ANALYTICAL RESULTS

TABLE 1

CENTRAL SITE
LEACHATE SAMPLE ANALYTICAL RESULTS
TREATMENT PLANT EFFLUENT & LEACHATE POND
November 1998

Analyte	*Units*	*November 17, 1998*		*Reporting Limit (1)*
		Treatment Plant Effluent	*Pond Composite*	
Antimony	mg/L	ND	ND	0.2
Arsenic	mg/L	0.0024	0.017	0.002
Beryllium	mg/L	ND	ND	0.01
Cadmium	mg/L	ND	ND	0.001
Chromium	mg/L	ND	0.0092	0.002
Copper	mg/L	ND	ND	0.002
Cyanide	mg/L	ND	ND	0.005
Lead	mg/L	ND	ND	0.002
Mercury	mg/L	ND	ND	0.0002
Nickel	mg/L	0.028	0.041	0.002
Selenium	mg/L	ND	ND	0.005
Silver	mg/L	ND	ND	0.0002
Thallium	mg/L	ND	ND	0.2
Zinc	mg/L	0.052	0.029	0.01
pH	pH Units	7.3	7.5	0-14
BOD	mg/L	22	411	2
Total Suspended Solids	mg/L	41	43	1
Total Toxic Organics (2)	mg/L	0	0	(3)

ND= Not Detected
BOD= Biological Oxygen Demand
mg/L= milligrams per Liter
NA= Not Analyzed

(1) Please be advised that the actual reporting limits may deviate from those presented herein in cases of elevated concentrations or matrix interferences. Based on information provided by the County of Sonoma, the majority of actual reporting limits for the County of Sonoma landfill sites have historically been consistent with the minimum reporting limit requirements.

(2) Please note that Total Toxic Organics (TTO) is a summation of the volatile (EPA Method 8260) and semi-volatile (EPA Method 8270) organics for all quantifiable compounds with detected values greater than 0.01 mg/L. There were organic compounds detected at levels less than 0.01 mg/L however they were not included in the calculation of the TTO value. Please refer to the Certified Analytical Report (CAR) for the actual values.

(3) The detection limits for organic compounds vary for each compound. Please refer to the CAR for the actual detection limit.

APPENDIX C

CERTIFIED ANALYTICAL REPORT

RECEIVED DEC 1 1 1998

alpha

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Sonoma County Central Landfill
c/o EBA Wastetechnologies
825 Sonoma Ave., Ste. C
Santa Rosa, CA 95402
Attn: Christine Scheib

Date Printed 12/07/98

Page 1

atch Number	Receipt Date	Client	Client P.O.	Send Via
8-1119-013	11/18/98 11:45	SCCLEBA	040-6-1024	Mail

atch 98-1119-013 consisted of 2 Samples and 38 Tests

ample 1 Treatment Plant - Effluent
Sample Type: Water Sampled by: David Noren Sampled: 11/17/98 12:00

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Cyanide	335.2		12/02/98	ND	mg/l	.005	
pH	EPA150		11/19/98	7.3	pH	1	
BOD - 5 Day	EPA405.1		11/24/98	22	mg/l	2	
Total Suspended Solids	160.2		11/24/98	41	mg/l	1	
Antimony	6010		11/24/98	ND	mg/l	.2	
Arsenic GF	200.9		12/03/98	.0024	mg/l	.002	
Barium	6010		11/20/98	ND	mg/l	.01	
Cadmium	6010		11/20/98	ND	mg/l	.001	
Chromium	200.9		12/01/98	ND	mg/l	.002	
Copper	200.9		12/01/98	ND	mg/l	.002	
Lead	200.9		11/25/98	ND	mg/l	.002	
Mercury, Low Level	245.1		11/24/98	ND	mg/l	.0002	
Nickel	200.9		11/20/98	.028	mg/l	.002	
Selenium	200.9		11/23/98	ND	mg/l	.005	
Silver	200.9		11/30/98	ND	mg/l	.0002	
Thallium	6010		12/02/98	ND	mg/l	.2	
Zinc	6010		11/20/98	.052	mg/l	.01	

ample 2 Leachate Pond #1,#2,#3 (Comp. 3:1)
Sample Type: Water Sampled by: David Noren Sampled: 11/17/98 12:30

Cyanide	335.2		12/02/98	ND	mg/l	.005	

L - Practical Quantitation Limit ND - None Detected
- Indicates Detection Limit altered due to Sample Dilution

TE

*** SECOND COPY ***

Bruce L. Gove
Laboratory Director

Date Printed: 12/07/98

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

CHEMICAL EXAMINATION REPORT

Sonoma County Central Landfill
c/o EBA Wastetechnologies
825 Sonoma Ave., Ste. C
Santa Rosa, CA 95402
Attn: Christine Scheib

Date Printed 12/07/98

Batch Number	Receipt Date	Client	Client P.O.	Send Via
98-1119-013	11/18/98 11:45	SCCLEBA	040-6-1024	Mail

(Sample 2 Leachate Pond #1,#2,#3 (Comp. 3-II) -- continued)

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
pH	EPA150		11/19/98	7.5	pH	1	
BOD - 5 Day	EPA405.1		11/24/98	411	mg/l	2	
Total Suspended Solids	160.2		11/24/98	43	mg/l	1	
Antimony	6010		11/24/98	ND	mg/l	.2	
Arsenic GF	200.9		12/03/98	.017	mg/l	.002	
Beryllium	6010		11/20/98	ND	mg/l	.01	
Cadmium	6010		11/20/98	ND	mg/l	.001	
Chromium	200.9		12/01/98	.0092	mg/l	.002	
Copper	200.9		12/01/98	ND	mg/l	.002	
Lead	200.9		11/25/98	ND	mg/l	.002	
Mercury, Low Level	245.1		11/24/98	ND	mg/l	.0002	
Nickel	200.9		11/20/98	.041	mg/l	.002	
Selenium	200.9		11/23/98	ND	mg/l	.005	
Silver	200.9		11/30/98	ND	mg/l	.0002	
Thallium	6010		12/02/98	ND	mg/l	.2	
Zinc	6010		11/20/98	.029	mg/l	.01	

PQL - Practical Quantitation Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

*** SECOND COPY ***

Bruce L. Gove
Laboratory Director

Date Printed: 12/07/98

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

December 7, 1998

Glenn Morelli
Sonoma County Central Landfill
500 Meecham Rd.
Petaluma, CA 95952

Quality Control Report

Batch Number: 98-1119-013

	Method Blank Recovery %	Matrix Spike Recovery %	Duplicate Spike Recovery %	RPD %
Matrix: Water				
Silver	ND	92.9	95.7	2.97
Arsenic GF	ND	110	110	0.00
Beryllium	ND	101	101	0.00
Cadmium	ND	100	102	1.98
Chromium	ND	94.9	97.1	2.29
Copper	ND	93.7	93.7	0.00
Mercury, Low Level	ND	108	105	2.82
Antimony	ND	107	104	2.84
Nickel	ND	102	102	0.00
Lead	ND	98.2	99.2	1.01
Selenium	ND	96.1	93.3	2.96
Thallium	ND	89.2	95.0	6.3
Zinc	ND	95.7	96.6	.936
Cyanide	ND	100	100	0.00
BOD - 5 Day	ND	108	103	4.74

This Batch passes method quality control acceptance criteria.

ND = none detected

Bruce L. Gove
Laboratory Director

Bruce L. Gove

Date Printed: 12/07/98

KIFF ANALYTICAL LLC

Report Number : 12782
Date : 12/04/98

Sample : TREATMENT PLANT-EFFLUENT
Project Name :
Project Number : 98-1119-13
Matrix : Water Sample Date :11/17/98
Date Analyzed : 11/28/98
Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 0.50	0.50	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	< 0.50	0.50	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1-Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	< 0.50	0.50	ug/L
1,2-Dichloropropane	2.2	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L
P,M-Xylene	< 0.50	0.50	ug/L
O-Xylene	< 0.50	0.50	ug/L
Styrene	< 0.50	0.50	ug/L
Isopropyl benzene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2-Chlorotoluene	< 0.50	0.50	ug/L
4-Chlorotoluene	< 0.50	0.50	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	< 0.50	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	< 0.50	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	< 0.50	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	< 0.50	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
Dibromofluoromethane (Surr)	102		% Recovery
1,2-Dichloroethane-d4 (Surr)	102		% Recovery
Toluene - d8 (Surr)	99.7		% Recovery
4-Bromofluorobenzene (Surr)	98.8		% Recovery

1) MRL = Method reporting limit
tr = Trace detected below reporting limit

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 12782
Date : 12/04/98

Sample : LEACHATE POND #1,2,3
Project Name :
Project Number : 98-1119-13
Matrix : Water Sample Date :11/17/98

Date Analyzed : 11/29/98
Analysis Method: EPA 8260B

Parameter	Measured Value	MRL [1]	Units
Dichlorodifluoromethane	< 0.50	0.50	ug/L
Chloromethane	< 0.50	0.50	ug/L
Vinyl Chloride	< 0.50	0.50	ug/L
Bromomethane	< 0.50	0.50	ug/L
Chloroethane	< 0.50	0.50	ug/L
Trichlorofluoromethane	< 0.50	0.50	ug/L
1,1-Dichloroethene	< 0.50	0.50	ug/L
Methylene Chloride	0.60	0.50	ug/L
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L
1,1-Dichloroethane	< 0.50	0.50	ug/L
2,2-Dichloropropane	< 0.50	0.50	ug/L
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L
Chloroform	< 0.50	0.50	ug/L
Bromochloromethane	< 0.50	0.50	ug/L
1,1,1-Trichloroethane	< 0.50	0.50	ug/L
1,1 Dichloropropene	< 0.50	0.50	ug/L
1,2-Dichloroethane	< 0.50	0.50	ug/L
Carbon Tetrachloride	< 0.50	0.50	ug/L
Benzene	< 0.50	0.50	ug/L
Trichloroethene	< 0.50	0.50	ug/L
1,2-Dichloropropane	< 0.50	0.50	ug/L
Bromodichloromethane	< 0.50	0.50	ug/L
Dibromomethane	< 0.50	0.50	ug/L
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L
Toluene	0.40	0.50	ug/L
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L
1,1,2-Trichloroethane	< 0.50	0.50	ug/L
1,3-Dichloropropane	< 0.50	0.50	ug/L
Tetrachloroethene	< 0.50	0.50	ug/L
Dibromochloromethane	< 0.50	0.50	ug/L
1,2-Dibromoethane	< 0.50	0.50	ug/L
Chlorobenzene	< 0.50	0.50	ug/L
1,1,1,2-Tetrachloroethane	< 0.50	0.50	ug/L
Ethylbenzene	1.33	0.50	ug/L
P,M-Xylene	3.11	0.50	ug/l
O-Xylene	1.55	0.50	ug/L
Styrene	< 0.50	0.50	ug/L
Isopropyl benzene	< 0.50	0.50	ug/L

Parameter	Measured Value	MRL [1]	Units
Bromoform	< 0.50	0.50	ug/L
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L
1,2,3-Trichloropropane	< 0.50	0.50	ug/L
n-Propylbenzene	< 0.50	0.50	ug/L
Bromobenzene	< 0.50	0.50	ug/L
1,3,5-Trimethylbenzene	< 0.50	0.50	ug/L
2-Chlorotoluene	< 0.50	0.50	ug/L
4-Chlorotoluene	< 0.50	0.50	ug/L
tert-Butylbenzene	< 0.50	0.50	ug/L
1,2,4-Trimethylbenzene	0.59	0.50	ug/L
sec-Butylbenzene	< 0.50	0.50	ug/L
p-Isopropyltoluene	1.2	0.50	ug/L
1,3-Dichlorobenzene	< 0.50	0.50	ug/L
1,4-Dichlorobenzene	2.1	0.50	ug/L
n-Butylbenzene	< 0.50	0.50	ug/L
1,2-Dichlorobenzene	< 0.50	0.50	ug/L
1,2-Dibromo-3-chloropropane	< 0.50	0.50	ug/L
1,2,4-Trichlorobenzene	< 0.50	0.50	ug/L
Hexachlorobutadiene	< 0.50	0.50	ug/L
Naphthalene	4.6	0.50	ug/L
1,2,3-Trichlorobenzene	< 0.50	0.50	ug/L
Dibromofluoromethane (Surr)	99.8		% Recovery
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery
Toluene - d8 (Surr)	96.5		% Recovery
4-Bromofluorobenzene (Surr)	98.9		% Recovery

1) MRL = Method reporting limit
tr = Trace detected below reporting limit

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report
Method Blank

Attention:	Ms. Cathy Phillips Alpha Analytical Labs 860 Waugh Lane, H-1 Ukiah, CA 95482	Date Sampled: Date Received: Date Analyzed: Invoice #:	Nov 17, 1998 Nov 20, 1998 Nov 24, 1998 10361NOV98
Project #:	98-119-113	Project Name:	
Client ID:	Method Blank	LAB ID:	10361-MB
Matrix:	Water	Dilution: 1:	1

	Name	Amount	Reporting Limit	Units
1.)	1,2 - Dichlorobenzene	ND	10	ug/l
2.)	1,2,4 - Trichlorobenzene	ND	10	ug/l
3.)	1,3 - Dichlorobenzene	ND	10	ug/l
4.)	1,4 - Dichlorobenzene	ND	10	ug/l
5.)	2 - Chloronaphthalene	ND	10	ug/l
6.)	2 - Chlorophenol	ND	10	ug/l
7.)	2 - Methylnaphthalene	ND	10	ug/l
8.)	2 - Methylphenol	ND	10	ug/l
9.)	2 - Nitrophenol	ND	10	ug/l
10.)	2,4 - Dichlorophenol	ND	10	ug/l
11.)	2,4 - Dimethylphenol	ND	10	ug/l
12.)	2,4 - Dinitrophenol	ND	50	ug/l
13.)	2,4 - Dinitrotoluene	ND	10	ug/l
14.)	2,4,5 - Trichlorophenol	ND	50	ug/l
15.)	2,4,6 - Trichlorophenol	ND	10	ug/l
16.)	2,6 - Dinitrotoluene	ND	10	ug/l
17.)	2 - Nitroaniline	ND	50	ug/l
18.)	3,3' - Dichlorobenzidine	ND	20	ug/l
19.)	3 - Nitroaniline	ND	50	ug/l
20.)	4 - Bromophenyl - phenylether	ND	10	ug/l
21.)	4 - Chloro - 3 - Methylphenol	ND	10	ug/l
22.)	4 - Chloroaniline	ND	10	ug/l
23.)	4 - Methylphenol	ND	10	ug/l
24.)	4 - Nitroaniline	ND	50	ug/l
25.)	4 - Nitrophenol	ND	50	ug/l
26.)	4,6 - Dinitro - 2 - Methylphenol	ND	50	ug/l
27.)	4 - Chlorophenyl - phenylether	ND	10	ug/l
28.)	Acenaphthene	ND	10	ug/l
29.)	Acenaphthylene	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter

ppm = parts per million = ug/ml = milligram per milliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

8270MBW.xls

Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report
Method Blank

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: Method Blank

LAB ID: 10361-MB

Matrix: Water

Dilution: 1: 1

Name	Amount	Reporting Limit	Units
30.) Anthracene	ND	10	ug/l
31.) Benzo (a) Anthracene	ND	10	ug/l
32.) Benzo (a) Pyrene	ND	10	ug/l
33.) Benzo (b) Fluoranthene	ND	10	ug/l
34.) Benzo (g, h, i) Perylene	ND	10	ug/l
35.) Benzo (k) Fluoranthene	ND	10	ug/l
36.) Benzoic Acid	ND	50	ug/l
37.) Benzyl Alcohol	ND	10	ug/l
38.) bis (- 2 - Chloroethoxy) Methane	ND	10	ug/l
39.) bis (- 2 - Chloroethyl) Ether	ND	10	ug/l
40.) bis (2 - chloroisopropyl) Ether	ND	10	ug/l
41.) bis (2 - Ethylhexyl) Phthalate	ND	10	ug/l
42.) Butylbenzylphthalate	ND	10	ug/l
43.) Chrysene	ND	10	ug/l
44.) Di - N - Butylphthalate	ND	10	ug/l
45.) Di - N - Octyl Phthalate	ND	10	ug/l
46.) Dibenzo (a, h) Anthracene	ND	10	ug/l
47.) Dibenzofuran	ND	10	ug/l
48.) Diethylphthalate	ND	10	ug/l
49.) Dimethyl Phthalate	ND	10	ug/l
50.) Fluoranthene	ND	10	ug/l
51.) Fluorene	ND	10	ug/l
52.) Hexachlorobenzene	ND	10	ug/l
53.) Hexachlorobutadiene	ND	10	ug/l
54.) Hexachlorocyclopentadiene	ND	10	ug/l
55.) Hexachloroethane	ND	10	ug/l
56.) Indeno (1,2,3 - cd) Pyrene	ND	10	ug/l
57.) Isophorone	ND	10	ug/l
58.) N - Nitroso - Di – Propylamine	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter
ppm= parts per million = ug/ml= microgram per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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Analytical Laboratory Division
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EPA Method 8270 GCMS Analysis Report
Method Blank

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: Method Blank

LAB ID: 10361-MB

Matrix: Water

Dilution: 1: 1

Name	Amount	Reporting Limit	Units
59.) N - Nitrosodiphenylamine	ND	10	ug/l
60.) Naphthalene	ND	10	ug/l
61.) Nitrobenzene	ND	10	ug/l
62.) Pentachlorophenol	ND	50	ug/l
63.) Phenanthrene	ND	10	ug/l
64.) Phenol	ND	10	ug/l
65.) Pyrene	ND	10	ug/l

Surrogate % Recovery 2 - Fluorophenol =	43%
Surrogate % Recovery Phenol - d6 =	45%
Surrogate % Recovery Nitrobenzene - d5 =	50%
Surrogate % Recovery 2 - Fluorobiphenyl =	52%
Surrogate % Recovery 2,4,6 - Tribromophenol =	57%
Surrogate % Recovery Terphenyl - d14 =	54%

ppb = parts per billion = ug/l = microgram per liter
ppm = parts per million = ug/ml = microgram per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

Dec 2, 1998
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification No. 1614)

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Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (LCSD)

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: LCS/LCSD

LAB ID: 10361-LCS
10361-LCSD

Matrix: Water

Dilution:

UNITS = ug/l

Compound	Sample Conc	Spike (ppb) Added	LCS	LCSD	LCS % Rec	LCSD % Rec	RPD	QC RPD	Limits % Rec
Phenol	ND	200	63	68	32%	34%	8%	42	12-89
2-Chlorophenol	ND	200	76	82	38%	41%	8%	40	12-123
1, 4-Dichlorobenzene	ND	100	44	47	44%	47%	7%	28	36-110
N-Nitroso-di-n-propylamine	ND	100	49	52	49%	52%	6%	38	41-130
1, 2, 4-Trichlorobenzene	ND	100	48	52	48%	52%	8%	28	39-120
4-Chloro-3-Methylphenol	ND	200	86	92	43%	46%	7%	42	20-110
Acenaphthene	ND	100	52	54	52%	54%	4%	31	46-135
4-Nitrophenol	ND	200	89	97	45%	49%	9%	50	10-130
2, 4-Dinitrotoluene	ND	100	47	48	47%	48%	2%	38	24-115
Pentachlorophenol	ND	200	103	107	52%	54%	4%	50	9-190
Pyrene	ND	100	50	50	50%	50%	0%	31	26-140

ppb = parts per billion = ug/l = micrograms per liter
ppm = parts per million = ug/ml = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Dec 2, 1998
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 1914)

8270LCSW.xls

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Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report

Attention:	Ms. Cathy Phillips Alpha Analytical Labs 860 Waugh Lane, H-1 Ukiah, CA 95482	Date Sampled: Date Received: Date Analyzed: Invoice #:	Nov 17, 1998 Nov 20, 1998 Nov 24, 1998 10361NOV98
Project #:	98-119-113	Project Name:	
Client ID:	Treatment Plant-Effluent	LAB ID:	10361-001A
Matrix:	Water	Dilution: 1:	1

	Name	Amount	Reporting Limit	Units
1.)	1,2 - Dichlorobenzene	ND	10	ug/l
2.)	1,2,4 - Trichlorobenzene	ND	10	ug/l
3.)	1,3 - Dichlorobenzene	ND	10	ug/l
4.)	1,4 - Dichlorobenzene	ND	10	ug/l
5.)	2 - Chloronaphthalene	ND	10	ug/l
6.)	2 - Chlorophenol	ND	10	ug/l
7.)	2 - Methylnaphthalene	ND	10	ug/l
8.)	2 - Methylphenol	ND	10	ug/l
9.)	2 - Nitrophenol	ND	10	ug/l
10.)	2,4 - Dichlorophenol	ND	10	ug/l
11.)	2,4 - Dimethylphenol	ND	10	ug/l
12.)	2,4 - Dinitrophenol	ND	50	ug/l
13.)	2,4 - Dinitrotoluene	ND	10	ug/l
14.)	2,4,5 - Trichlorophenol	ND	50	ug/l
15.)	2,4,6 - Trichlorophenol	ND	10	ug/l
16.)	2,6 - Dinitrotoluene	ND	10	ug/l
17.)	2 - Nitroaniline	ND	50	ug/l
18.)	3,3' - Dichlorobenzidine	ND	20	ug/l
19.)	3 - Nitroaniline	ND	50	ug/l
20.)	4 - Bromophenyl - phenylether	ND	10	ug/l
21.)	4 - Chloro - 3 - Methylphenol	ND	10	ug/l
22.)	4 - Chloroaniline	ND	10	ug/l
23.)	4 - Methylphenol	ND	10	ug/l
24.)	4 - Nitroaniline	ND	50	ug/l
25.)	4 - Nitrophenol	ND	50	ug/l
26.)	4,6 - Dinitro - 2 - Methylphenol	ND	50	ug/l
27.)	4 - Chlorophenyl - phenylether	ND	10	ug/l
28.)	Acenaphthene	ND	10	ug/l
29.)	Acenaphthylene	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter

ppm = parts per million = ug/ml = microgram per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

8270W001.xls

Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: Treatment Plant-Effluent

LAB ID: 10361-001A

Matrix: Water

Dilution: 1: 1

Name	Amount	Reporting Limit	Units
30.) Anthracene	ND	10	ug/l
31.) Benzo (a) Anthracene	ND	10	ug/l
32.) Benzo (a) Pyrene	ND	10	ug/l
33.) Benzo (b) Fluoranthene	ND	10	ug/l
34.) Benzo (g, h, i) Perylene	ND	10	ug/l
35.) Benzo (k) Fluoranthene	ND	10	ug/l
36.) Benzoic Acid	ND	50	ug/l
37.) Benzyl Alcohol	ND	10	ug/l
38.) bis (2 - Chloroethoxy) Methane	ND	10	ug/l
39.) bis (2 - Chloroethyl) Ether	ND	10	ug/l
40.) bis (2 - chloroisopropyl) Ether	ND	10	ug/l
41.) bis (2 - ethylhexyl) phthalate	ND	10	ug/l
42.) Butylbenzylphthalate	ND	10	ug/l
43.) Chrysene	ND	10	ug/l
44.) Di - N - Butylphthalate	ND	10	ug/l
45.) Di - N - Octyl Phthalate	ND	10	ug/l
46.) Dibenzo (a, h) Anthracene	ND	10	ug/l
47.) Dibenzofuran	ND	10	ug/l
48.) Diethylphthalate	ND	10	ug/l
49.) Dimethyl Phthalate	ND	10	ug/l
50.) Fluoranthene	ND	10	ug/l
51.) Fluorene	ND	10	ug/l
52.) Hexachlorobenzene	ND	10	ug/l
53.) Hexachlorobutadiene	ND	10	ug/l
54.) Hexachlorocyclopentadiene	ND	10	ug/l
55.) Hexachloroethane	ND	10	ug/l
56.) Indeno (1,2,3 – cd) Pyrene	ND	10	ug/l
57.) Isophorone	ND	10	ug/l
58.) N - Nitroso - Di – Propylamine	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter

ppm = parts per million = ug/ml = microgram per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report

Attention:	Ms. Cathy Phillips Alpha Analytical Labs 860 Waugh Lane, H-1 Ukiah, CA 95482	Date Sampled: Date Received: Date Analyzed: Invoice #:	Nov 17, 1998 Nov 20, 1998 Nov 24, 1998 10361NOV98
Project #:	98-119-13	Project Name:	
Client ID:	Treatment Plant-Effluent	LAB ID:	10361-001A
Matrix:	Water	Dilution: 1:	1

Name	Amount	Reporting Limit	Units
59.) N - Nitrosodiphenylamine	ND	10	ug/l
60.) Naphthalene	ND	10	ug/l
61.) Nitrobenzene	ND	10	ug/l
62.) Pentachlorophenol	ND	50	ug/l
63.) Phenanthrene	ND	10	ug/l
64.) Phenol	ND	10	ug/l
65.) Pyrene	ND	10	ug/l

Surrogate % Recovery 2 - Fluorophenol =	23%
Surrogate % Recovery Phenol - d6 =	25%
Surrogate % Recovery Nitrobenzene - d5 =	46%
Surrogate % Recovery 2 - Fluorobiphenyl =	44%
Surrogate % Recovery 2,4,6 - Tribromophenol =	32%
Surrogate % Recovery Terphenyl - d14 =	49%

ppb = parts per billion = ug/l = microgram per liter
ppm = parts per million = ug/ml = microgram per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

Dec 2, 1998
Date Reported

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DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
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Sparger Technology, Inc.
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EPA Method 8270 GCMS Analysis Report

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: Leachate Pond (1, 2, 3) Comp

LAB ID: 10361-002A

Matrix: Water

Dilution: 1: 1

	Name	Amount	Reporting Limit	Units
1.)	1,2 - Dichlorobenzene	ND	10	ug/l
2.)	1,2,4 - Trichlorobenzene	ND	10	ug/l
3.)	1,3 - Dichlorobenzene	ND	10	ug/l
4.)	1,4 - Dichlorobenzene	ND	10	ug/l
5.)	2 - Chloronaphthalene	ND	10	ug/l
6.)	2 - Chlorophenol	ND	10	ug/l
7.)	2 - Methylnaphthalene	ND	10	ug/l
8.)	2 - Methylphenol	ND	10	ug/l
9.)	2 - Nitrophenol	ND	10	ug/l
10.)	2,4 - Dichlorophenol	ND	10	ug/l
11.)	2,4 - Dimethylphenol	ND	10	ug/l
12.)	2,4 - Dinitrophenol	ND	50	ug/l
13.)	2,4 - Dinitrotoluene	ND	10	ug/l
14.)	2,4,5 - Trichlorophenol	ND	50	ug/l
15.)	2,4,6 - Trichlorophenol	ND	10	ug/l
16.)	2,6 - Dinitrotoluene	ND	10	ug/l
17.)	2 - Nitroaniline	ND	50	ug/l
18.)	3,3' - Dichlorobenzidine	ND	20	ug/l
19.)	3 - Nitroaniline	ND	50	ug/l
20.)	4 - Bromophenyl - phenylether	ND	10	ug/l
21.)	4 - Chloro - 3 - Methylphenol	ND	10	ug/l
22.)	4 - Chloroaniline	ND	10	ug/l
23.)	4 - Methylphenol	39	10	ug/l
24.)	4 - Nitroaniline	ND	50	ug/l
25.)	4 - Nitrophenol	ND	50	ug/l
26.)	4,6 - Dinitro - 2 - Methylphenol	ND	50	ug/l
27.)	4 - Chlorophenyl - phenylether	ND	10	ug/l
28.)	Acenaphthene	ND	10	ug/l
29.)	Acenaphthylene	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter

ppm = parts per million = ug/ml = microgram per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

8270W002.xls

Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report

Attention: Ms. Cathy Phillips
Alpha Analytical Labs
860 Waugh Lane, H-1
Ukiah, CA 95482

Date Sampled: Nov 17, 1998
Date Received: Nov 20, 1998
Date Analyzed: Nov 24, 1998
Invoice #: 10361NOV98

Project #: 98-119-13

Project Name:

Client ID: Leachate Pond (1, 2, 3) Comp

LAB ID: 10361-002A

Matrix: Water

Dilution: 1: 1

Name	Amount	Reporting Limit	Units
30.) Anthracene	ND	10	ug/l
31.) Benzo (a) Anthracene	ND	10	ug/l
32.) Benzo (a) Pyrene	ND	10	ug/l
33.) Benzo (b) Fluoranthene	ND	10	ug/l
34.) Benzo (g, h, i) Perylene	ND	10	ug/l
35.) Benzo (k) Fluoranthene	ND	10	ug/l
36.) Benzoic Acid	ND	50	ug/l
37.) Benzyl Alcohol	ND	10	ug/l
38.) bis (2 - Chloroethoxy) Methane	ND	10	ug/l
39.) bis (2 - Chloroethyl) Ether	12	10	ug/l
40.) bis (2 - chloroisopropyl) Ether	ND	10	ug/l
41.) bis (2 - ethylhexyl) phthalate	ND	10	ug/l
42.) Butylbenzylphthalate	ND	10	ug/l
43.) Chrysene	ND	10	ug/l
44.) Di - N - Butylphthalate	ND	10	ug/l
45.) Di - N - Octyl Phthalate	ND	10	ug/l
46.) Dibenzo (a, h) Anthracene	ND	10	ug/l
47.) Dibenzofuran	ND	10	ug/l
48.) Diethylphthalate	ND	10	ug/l
49.) Dimethyl Phthalate	ND	10	ug/l
50.) Fluoranthene	ND	10	ug/l
51.) Fluorene	ND	10	ug/l
52.) Hexachlorobenzene	ND	10	ug/l
53.) Hexachlorobutadiene	ND	10	ug/l
54.) Hexachlorocyclopentadiene	ND	10	ug/l
55.) Hexachloroethane	ND	10	ug/l
56.) Indeno (1,2,3 – cd) Pyrene	ND	10	ug/l
57.) Isophorone	ND	10	ug/l
58.) N - Nitroso - Di – Propylamine	ND	10	ug/l

ppb = parts per billion = ug/l = microgram per liter

ppm = parts per million = ug/ml = microgram per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

8270W002.xls

Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 8270 GCMS Analysis Report

Attention:	Ms. Cathy Phillips Alpha Analytical Labs 860 Waugh Lane, H-1 Ukiah, CA 95482	Date Sampled: Date Received: Date Analyzed: Invoice #:	Nov 17, 1998 Nov 20, 1998 Nov 24, 1998 10361NOV98
Project #:	98-119-13	Project Name:	
Client ID:	Leachate Pond (1, 2, 3) Comp	LAB ID:	10361-002A
Matrix:	Water	Dilution: 1:	1

Name	Amount	Reporting Limit	Units
59.) N - Nitrosodiphenylamine	ND	10	ug/l
60.) Naphthalene	ND	10	ug/l
61.) Nitrobenzene	ND	10	ug/l
62.) Pentachlorophenol	ND	50	ug/l
63.) Phenanthrene	ND	10	ug/l
64.) Phenol	18	10	ug/l
65.) Pyrene	ND	10	ug/l

Surrogate % Recovery 2 - Fluorophenol =	28%
Surrogate % Recovery Phenol - d6 =	30%
Surrogate % Recovery Nitrobenzene - d5 =	44%
Surrogate % Recovery 2 - Fluorobiphenyl =	44%
Surrogate % Recovery 2,4,6 - Tribromophenol =	36%
Surrogate % Recovery Terphenyl - d14 =	41%

ppb = parts per billion = ug/l = microgram per liter
ppm= parts per million = ug/ml=microgram per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

Dec 2, 1998
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 1814)

8270W002.xls

3050 Fite Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, CA 95482 • (707) 468-0401 • FAX (707) 468-5267

DATE _____ PAGE ____ OF ____

CLIENT'S NAME: Sonoma County Refuse Disposal

STREET ADDRESS: 500 Meacham Rd. CITY: Petaluma STATE: ZIP:

PROJECT NAME: Central - Leachate

CONTRACT/PURCHASE ORDER/QUOTE NUMBER:

SIGNATURE OF PERSON AUTHORIZING WORK UNDER TERMS STATED ON REVERSE SIDE OF THIS FORM.

PROJECT MANAGER: Christine Scheib

PHONE NUMBER: (707) 544-0784

FAX NUMBER: (707) 544-0866

SITE CONTACT: Don Poindexter

SAMPLED BY: David Noren

SAMPLE CONDITION ON RECEIPT:

COLD/ICED? Yes

BUBBLES OR AIR SPACE? NO

WERE SAMPLES PRESERVED? Yes

ANALYSES: BOD, pH, TSS; Cyanide; 8260 w/p; 8270 w/p; Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

SAMPLE NUMBER/IDENTIFICATION	DATE	TIME	LAB SAMPLE NUMBER	SAMPLE TYPE: LIQ	AIR	SOLID	COMP	GRAB	NO. OF CONTS.	BOD, pH, TSS	Cyanide	8260 w/p	8270 w/p	Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn	EXPLAIN IRREGULARITIES BELOW
Treatment Plant-Effluent	11/17/98	1200	98-1119-13-1	X						X	X	X	X	X	X * All metals are total
Leachate Pond #1	↓	1210	-2	X						↓	↓	↓	↓	↓	Composite samples 3 to 1
Leachate Pond #2	↓	1220	[illegible]	X						↓	↓	↓	↓	↓	Pond samples
Leachate Pond #3	↓	1230	[illegible]	X						↓	↓	↓	↓	↓	

RELINQUISHED BY: (SIGNATURE) David Noren

RECEIVED BY: (SIGNATURE) R Denfeld — DATE 11/18/98 TIME 9:9

RELINQUISHED BY: (SIGNATURE) R Denfeld

RECEIVED BY: (SIGNATURE) Cathy Bullings — DATE 11/18/98 TIME 11:45

RELINQUISHED BY: (SIGNATURE)

RECEIVED FOR LABORATORY BY:

METHOD OF SHIPMENT

AUTHORIZED BY:

SPECIAL INSTRUCTIONS

DRIVING TIME | SITE TIME | TOTAL TIME

TURN AROUND TIME REQUESTED: Std

SAMPLE CONTROL OFFICER

SAMPLE DESPOSITION:

1. STORAGE TIME REQUESTED _____ DAYS (SAMPLES WILL BE STORED FOR 30 DAYS WITHOUT ADDITIONAL CHARGES. THEREAFTER STORAGE CHARGES WILL BE BILLED AT THE PUBLISHED RATES.)
2. SAMPLE TO BE RETURNED TO CLIENT? ☐ YES ☐ NO

HAZARDOUS MATERIALS ARE THE PROPERTY OF THE CLIENT. THE CLIENT IS RESPONSIBLE FOR PROPER DISPOSAL OF HAZARDOUS WASTES. CLIENTS NOT PICKING UP HAZARDOUS WASTES

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(707) 468-0401

CHEMICAL EXAMINATION REPORT

Sonoma County Central Landfill
500 Meecham Rd.
Petaluma, CA 95952
Attn: Glenn Morelli

Date Printed 10/12/98

Batch Number	Receipt Date	Client	Client P.O.	Send Via
98-0928-003	09/25/98 16:44	SCCLEBA	040-6-1024	Mail

(continued from previous page)

Sample 7 Leachate Outfall - Central Landfill
Sample Type: Water Sampled by: David Noren Sampled: 9/24/98 12:30

Dissolved Metals Analyses by ICP

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Antimony, dissolved	6010		10/08/98	ND	mg/l	0.02	
Arsenic, dissolved	200.9		10/08/98	.012	mg/l	0.01	
Barium, dissolved	6010		10/08/98	.77	mg/l	0.01	
Beryllium, dissolved	6010		10/08/98	ND	mg/l	0.01	
Cadmium - Dissolved	6010		10/08/98	ND	mg/l	0.01	
Chromium, dissolved	6010		10/08/98	ND	mg/l	0.01	
Cobalt, dissolved	6010		10/08/98	ND	mg/l	0.02	
Copper, dissolved	6010		10/08/98	ND	mg/l	0.02	
Lead, dissolved	200.9		10/09/98	ND	mg/l	0.01	
Mercury, dissolved	245.1		10/08/98	ND	mg/l	.001	
Molybdenum, dissolved	246.1		10/08/98	ND	mg/l	0.02	
Nickel, dissolved	6010		10/08/98	.022	mg/l	0.02	
Selenium, dissolved	200.9		10/08/98	ND	mg/l	.005	
Silver, dissolved	6010		10/08/98	ND	mg/l	0.01	
Thallium, dissolved	200.9		10/08/98	ND	mg/l	0.20	
Vanadium, dissolved	6010		10/08/98	ND	mg/l	0.01	
Zinc, dissolved	6010		10/08/98	ND	mg/l	0.01	
Total Dissolved Solids	160.1		9/26/98	2250	mg/l	2	
pH	EPA150		9/26/98	6.9	pH	1	
Specific Conductance	120.1		9/26/98	3510	umhos	20	
Sulfate	300.0		9/25/98	5.2	mg/l	1	

PQL - Practical Quantitation Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

TRS

Bruce L. Gove
Laboratory Director

Bruce L. Gove

Date Printed: 10/12/98

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482
(707) 468-0401

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Batch Number	Receipt Date	Client	Client P.O.	Send Via
98-0928-003	09/25/98 16:44	SCCLEBA	040-6-1024	Mail

(Sample 7 Leachate Outfall - Central Landfill -- continued)

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
Chloride	300.0		9/28/98	494	mg/l	.5	
Alkalinity, Total (CACO3)	310.1		9/26/98	1310	mg/l	1	
Fluoride	300.0		9/25/98	1.1	mg/l	.1	
Nitrate Nitrogen	300.0		9/25/98	1.1	mg/l	.01	
Chemical Oxygen Demand	410.4		10/05/98	240	mg/l	5	
Calcium	6010		10/08/98	270	mg/l	.5	
Magnesium	6010		10/08/98	150	mg/l	.5	
Sodium	6010		10/08/98	240	mg/l	.5	
EPA 601/602 - Water	601/602						
Halogenated Volatile Organics	601/602		10/08/98				
Bromodichloromethane				ND	ug/L	.5	
Bromoform				ND	ug/L	.5	
Bromomethane				ND	ug/L	.5	
Carbon Tetrachloride				ND	ug/L	.5	
Chlorobenzene				6.3	ug/L	.5	
Chloroethane				2.7	ug/L	.5	
2-Chloroethylvinyl ether				ND	ug/L	1.0	
Chloroform				ND	ug/L	.5	
Chloromethane				ND	ug/L	.5	
Chlorotoluene				.61	ug/L	.5	
Dibromochloromethane				ND	ug/L	.5	
1,2-Dichlorobenzene				ND	ug/L	.5	
1,3-Dichlorobenzene				ND	ug/L	.5	
1,4-Dichlorobenzene				5	ug/L	.5	
Dichlorodifluoromethane				ND	ug/L	.5	

PQL - Practical Quantitation Limit ND - None Detected
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Bruce L. Gove
Laboratory Director

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Batch Number	Receipt Date	Client	Client P.O.	Send Via
98-0928-003	09/25/98 16:44	SCCLEBA	040-6-1024	Mail

(Sample 7 Leachate Outfall - Central Landfill -- continued)

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUT
1,1-Dichloroethane				ND	ug/L	.5	
1,2-Dichloroethane				ND	ug/L	.5	
1,1-Dichloroethylene				ND	ug/L	.3	
cis-1,2-Dichloroethylene				ND	ug/L	.5	
trans-1,2-Dichloroethylene				ND	ug/L	.5	
1,2-Dichloropropane				ND	ug/L	.5	
cis-1,3-Dichloropropylene				ND	ug/L	.5	
trans-1,3-Dichloropropylene				ND	ug/L	.5	
Methylene Chloride				ND	ug/L	.5	
1,1,2,2-Tetrachloroethane				ND	ug/L	.5	
Tetrachloroethylene				ND	ug/L	.5	
1,1,1-Trichloroethane				ND	ug/L	.5	
1,1,2-Trichloroethane				ND	ug/L	.5	
Trichloroethylene				ND	ug/L	.5	
Trichlorofluoromethane				ND	ug/L	.5	
Vinyl Chloride				ND	ug/L	.5	
Aromatic Volatile Organics	601/602		10/08/98				
Benzene				1.3	ug/L	.5	
Chlorobenzene				2.2	ug/L	.3	
1,2-Dichlorobenzene				6.3	ug/L	.5	
1,3-Dichlorobenzene				ND	ug/L	.5	
1,4-Dichlorobenzene				ND	ug/L	.5	
Ethylbenzene				5	ug/L	.5	
Toluene				3.5	ug/L	.5	
Total Xylenes				1	ug/L	.3	
				7.9	ug/L	.5	

PQL - Practical Quantitation Limit ND - None Detected
' - Indicates Detection Limit altered due to Sample Dilution

Bruce L. Gove
Laboratory Director

Date Printed: 10/12/98

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CHEMICAL EXAMINATION REPORT

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Petaluma, CA 95952
Attn: Glenn Morelli

Date Printed 10/12/98

ch Number	Receipt Date	Client	Client P.O.	Send Via
0928-003	09/25/98 16:44	SCCLEBA	040-6-1024	Mail

ple 7 Leachate Outfall - Central Landfill -- continued)	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	PQL	DILUTION
rganochlorine Pesticides	EPA608	10/01	10/06/98				
Aldrin				ND	ug/l	.01	
a-BHC				ND	ug/l	.01	
b-BHC				ND	ug/l	.05	
d-BHC				ND	ug/l	.05	
c-BHC - Lindane				ND	ug/l	.01	
Chlordane				ND	ug/l	.05	
4,4'-DDD				ND	ug/l	.02	
4,4'-DDE				ND	ug/l	.02	
4,4'-DDT				ND	ug/l	.02	
Dieldrin				ND	ug/l	.05	
Endosulfan I				ND	ug/l	.01	
Endosulfan II				ND	ug/l	.02	
Endosulfan Sulfate				ND	ug/l	.05	
Endrin				ND	ug/l	.01	
Endrin Aldehyde				ND	ug/l	.05	
Heptachlor				ND	ug/l	.02	
Heptachlor Epoxide				ND	ug/l	.02	
Toxaphene				ND	ug/l	.5	
PCB Aroclor 1016				ND	ug/l	.2	
PCB Aroclor 1221				ND	ug/l	.2	
PCB Aroclor 1232				ND	ug/l	.2	
PCB Aroclor 1242				ND	ug/l	.2	
PCB Aroclor 1248				ND	ug/l	.2	
PCB Aroclor 1254				ND	ug/l	.2	
PCB Aroclor 1260				ND	ug/l	.2	

Practical Quantitation Limit ND - None Detected
Indicates Detection Limit altered due to Sample Dilution

Bruce L. Gove
Laboratory Director

Bruce L. Gove

Date Printed: 10/12/98

APPENDIX B-11

Load Check Program

County of Sonoma
Transportation and Public Works
Refuse Division

Load Checking Program
August 4, 1999

INTRODUCTION

In recent years, the hazards posed by the intentional and unintentional disposal of hazardous wastes at solid waste facilities have become the subject of increasing concern. The repercussions of careless disposal practices include injuries and illness to transfer station and landfill workers, fires and explosions in collection vehicles and at the transfer stations and landfill, and contamination of air and ground water.

In response to the hazards posed by indiscriminate disposal of prohibited wastes at solid waste facilities, the California Regional Water Quality Control Board (RWQCB) has included the requirements for a load checking program in Title 23, Code of California Regulations (CCR), Division 3, Chapter 15, Section 2523 (b) (2). Load checking is also a requirement of the Sonoma County Central Landfill and its transfer stations as stated in Appendix E of The Report of Disposal Site Information, Central Disposal Site, and in Appendix 5, Item B & C of The Report of Station Information for all Transfer Stations.

The intent of the load checking program is to discourage and prevent the improper disposal of prohibited waste. The load checking program for the County of Sonoma, Disposal Operations, is designed to identify hazardous waste and other ineligible waste and prevent their disposal at the landfill.

1.0 PUBLIC INFORMATION & EDUCATION

One aspect of the load checking program is to provide information and education to the public. The information will be designed to notify the general public on rules and regulations governing non-acceptable waste. These wastes will be outlined later, but are generally defined as wastes

that pose a threat to public health or the environment. The public will be educated through the Sonoma County Waste Management Agency's Recycling Guide, and public service announcements utilizing various forms of media.

Additionally, disposal workers will hand out information, from both Refuse Operations and the Sonoma County Waste Management Agency, containing guidelines for proper disposal or reuse of household toxic materials. As regulations change the prohibited wastes, these items will be noted by press releases and additional public information.

The most convenient way for the public to dispose of hazardous waste, at this time, is the household toxic roundups. These events are sponsored by the Sonoma County Waste Management Agency and are held from May through October each year. The events are free of charge and the public is in and out in about 15 minutes. There is also a location for reusable material at these events.

A new service has been added in 1999, the Toxic Taxi. The Toxic Taxi will pick up hazardous materials at the public's residence by appointment. There is a small fee for this service which includes disposal cost. The Toxic Taxi is also administered by the Sonoma County Waste Management Agency.

2.0 DESCRIPTION OF ACCEPTABLE AND PROHIBITED WASTE

This section describes types of waste that can be accepted at the Central Landfill and transfer stations. In addition, the characteristics of different hazardous wastes are described.

2.1 Permissible Waste

The County of Sonoma, Refuse Disposal Operations is allowed to accept the following waste in accordance with its Solid Waste Facility Permit No. 490-AA--001:
Residential and commercial refuse, including garbage and rubbish.
Nonhazardous solid waste from industrial sources.
Construction and demolition waste.
Other nonhazardous solid waste not prohibited from being accepted at the landfill or transfer stations under its operating permits or under applicable law.

2.2 Prohibited Waste

Prohibited waste includes designated hazardous waste and liquid waste. The following is a listing of prohibited waste to assist the onsite trained personnel in making proper identification:

1) All Liquids (Septic and all liquid waste)
2) Asbestos (Friable)
3) Auto batteries
4) Paint, both water and oil based
5) Pesticides
6) Antifreeze
7) Dead animals
8) Gasoline or other Liquid Fuels
9) Fluorescent tubes in quantities of 25 or more
10) Wood preservatives(Creosote or PCPE's)
11) Gas cylinders, unless the valve is completely removed
12) Medical waste(often identified by a red bag)
13) PCBs (Polychlorinated Biphenyls)
14) Mercury
15) Oil, petroleum products

A master list of common items that we have received can be found in Appendix F.

Hazardous wastes are defined as those wastes that exhibit any of the criteria set forth in Title 22, CCR, Division 4, Chapter 30, Article 11. As presented in Article 11, Criteria for Identification of Hazardous and Extremely Hazardous Waste include toxicity (Sections 66696 and 66699), ignitability (Section 66702), reactivity (Section 66705), and corrosive (Section 66708). In addition, those materials considered hazardous wastes according to the Resource Conservation and Recovery Act (1(RCRA), 42 U.S.C. 6901 et seq. also are considered hazardous wastes under State Law (California Health and Safety Code, Sections 25143.2 and 25159.5).

To help operations personnel perform effective load checking duties, they must understand what makes waste hazardous.

Wastes are hazardous if they have any of the following properties:

Toxicity
Ignitability
Reactivity
Corrosive
Other materials defined as hazardous in Title 22, CCR, Division 4,Chapter 30

Examples of hazardous wastes containing these properties are as follows:

2.2.1 Toxic Waste

Poisonous or toxic wastes are hazardous because they can cause illness or death if ingested, inhaled, injected, or absorbed through the skin. Short term effects can be skin burns or choking. Long term effects can include damage to internal organs, cancer, and other health problems. The term "toxic" also refers to effects on animals and plants in the environment. Examples are:
Liquids - pesticides and sanitizing chemicals, liquid industrial wastes containing metals and other chemicals such as cyanide or formaldehyde (embalming fluid).
Gases - chlorine, nitrogen, acetylene.
Solids - sludge, waste inks, pesticides, cyanide compounds.

2.2.2 Ignitable Waste

Flammable materials are hazardous because they ignite easily and burn intensely. They can be liquids, solids, or gases. Examples are:
Liquids - gasoline, paint thinners, strippers, degreasers and solvents, epoxy resin, glues and adhesives, rubber cement, waste ink.
Gases - acetylene cylinders, hydrogen cylinders, propane and butane, liquified gas bottles, some aerosol containers
Solids - aluminum phosphide, ammonium nitrate, phosphoric, matches.

How to identify flammable materials: Industrial Labels: "Flammable," "Ignitable," "Flame Symbol," "Oxidizer."

Types of Material: fuels, solvents, and compressed gases.

2.2.3 Reactive Waste

Reactive wastes are unstable or react with other materials to burn, explode, or give off fumes when mixed with water, air, or other materials. Examples are:
Liquids - some metal plating chemicals like chromic acid, cyanide solutions, water-treatment chemicals for swimming pools
Gases - Oxygen

Solids - explosives like dynamite, ammonium nitrate fertilizer, phosphorus, dry swimming pool chemicals, epoxy resins

How to identify reactive wastes: Industrial Labels: "Oxidizer," "Organic Peroxide," "Explosive," "Dangerous, "Blasting Agents, "Reactive"

Words on Labels: "May react with other materials," "incompatible with ..." "unstable," "keep away from..."

Types of Wastes: suspicious liquid and dry substances including swimming pool chemicals.

2.2.4 Corrosive Wastes

Corrosive wastes are hazardous because they can dissolve metals and burn skin and eyes on contact. They include acids, bases, and other harsh chemicals such as bleach and cleaning components. Examples are:
Liquids - acids, bases, metal-treating compounds, ammonia, laundry bleaches, and alkaline degreasers (restaurant cleansers)
Gases - chlorine, ammonia, others
Solids - sodium hydroxide or lye, fertilizers, detergents

How to identify corrosive wastes: Industrial Labels: "Corrosives," precautionary words on label such as "Danger, ""Caution," "Warning," or "May be corrosive or irritate skin and eyes."

Types of Wastes: industrial metal cleaning products, suspicious liquid and dry granular material.

2.2.5 Other Hazardous Wastes

Certain other wastes are hazardous and require special treatment/handling. Examples are:
Radioactive materials with "radioactive" label
Waste lubricating oils
Loads of more than 25 fluorescent tubes
Car and truck batteries
Water-based and oil-based paint

2.2.6 Non-Biodegradable Wastes

Non-Biodegradable wastes are hazardous because they build up in the environment and poison or injure plants and animals. Examples are:
Liquids - PCBs, liquids containing some pesticides and metals, mercury.
Solids - Certain pesticides like DDT, utility poles treated with PCP, lead and asbestos.

How to identify toxic wastes which harm the environment: Industrial Labels: Contains PCBs, pesticide labels, "Asbestos".

Types of Wastes: Electrical equipment, pesticides, utility poles, insulation material.

2.2.7 Medical Wastes

Waste that meets both of the following:
Waste generated during diagnosis, treatment or immunization, research activities, biologicals production or testing.
Bio-hazardous waste or sharps waste.

2.2.7.1 Bio-hazardous Wastes

Laboratory Waste:
Specimen cultures from medical & pathological labs.
Infectious agent cultures from research & industrial labs.
Production wastes of bacteria, viruses or spores.
Suspected contaminated specimens or tissues from surgery or autopsy.
Suspected contaminated animal parts, tissues fluids or carcasses.
Waste containing recognizable fluid blood.
Waste containing suspected contaminated excretion, exudate or secretions.
Waste contaminate with chemotherapeutic agents.

Examples include, but are not limited to the following:
All animal carcasses.
Waste in red bags that have not been autoclaved
Red plastic sharps boxes & loose hypodermic needles
Syringes, tubing or IV bags containing liquid blood

3.0 LOAD CHECKING PROGRAM

3.1 Objective

The objective of the load checking program is to detect and deter attempts to dispose of prohibited wastes. The program developed for the County of Sonoma, has been structured to meet or exceed the requirements of Title 40 of the Code of Federal Regulations, Part 258, Subpart C, Section 258.20 (Subtitle D) and 23 CCR 2S23b)(2)

3.2 Training

All operations personnel (i.e., scale house attendant, spotters, equipment operators, etc.) are trained to identify prohibited waste and properly handle those wastes. This training program is conducted for all new operations employees as part of their job orientation, and also conducted annually to existing operations personnel as a refresher course. A copy of the load checking program is available to all employees, and a copy is located in the conference room library. During the annual training program, any updated regulations for hazardous waste will be disseminated.

3.3 Waste Screening

Waste screening is a function of the operations personnel during the operating hours of the landfill and transfer stations. All incoming loads are visually observed by the personnel and suspect waste is removed, identified and properly disposed of.

If the waste is identified as a hazardous waste it is returned to the generator (hauler) with instructions for proper disposal, or stored in the hazardous waste storage lockers located at each site. This waste is picked-up by a contractor every 90 days. Wastes will be lab packed and transported by a hazardous waste hauler.

The scale house attendant together with the spotters, at the landfill or at the transfer stations, have the right to reject any load that is suspected of carrying prohibited waste. The operations employees conduct a continuous good faith effort of enforcement in an attempt to safeguard the employees, customers and the facility.

3.3.1 Storage of Materials in Hazardous Waste Lockers

Temporary Storage
Initially, intercepted waste that may be ineligible, but does not pose any

immediate danger, are set in a temporary accumulation area. Disposal Workers inspect the items and determine if they are indeed ineligible. If they are deemed ineligible, they then will take the necessary steps for proper segregation and permanent storage in the hazardous waste lockers. Items that are found to be permissible waste are placed back into the waste stream. This process is typically done on a daily basis.

Items that may be dripping and could potentially mix with other items on the pad are placed into individual plastic bins to prevent a potentially serious chemical reaction between two incompatible substances. They are then transported to the HHW lockers for permanent storage.

For known and unknown substances that clearly are reactive or otherwise immediately dangerous, we will call an outside vendor to come lab pack and manage the material off-site. Any materials falling in this category will be isolated for pick up. In addition, we would notify the County Environmental Health Department of the situation.

Permanent Storage
The permanent hazardous waste storage lockers consist of compartments for segregating various types of material. The lockers are situated near the tipping area at the transfer stations. The storage lockers at the landfill are in a secured location in the "bone yard." Each locker has a spill containment floor, equipped with a chemical fire suppression unit.

Any material that cannot reasonably be identified but is not immediately dangerous or apparently reactive, will be isolated and stored for pick up. There will be a clearly identified and segregated storage area for these substances and containers. Each substance will be stored so that no contact occurs with another unknown substance by using individual plastic storage containers.

Each site has a binder where accumulation dates and current inventory are recorded. Hazardous waste in the hazardous waste storage lockers has a maximum storage/isolation time of 90 days.

Daily inspections of the storage lockers will ensure that substances are not leaking, reacting or otherwise posing a threat to the environment.

3.3.2 Disposal of Hazardous Waste

Hazardous or ineligible wastes are removed from our permanent storage within 90 days of the accumulation date. The type of disposal or recycling depends on the material type, specifically, we handle the various waste as follows:
Ammunition- Taken to Sheriff Office
Batteries- Recycled by a contractor
Gas cylinders- Recycled by a private company
Medical Waste- Only autoclaved waste accepted, non-autoclaved waste is handled by a bio-hazardous waste contractor.
Latex paint- Recycled, or bulk by hazardous waste hauler.
Oil-based products- Handled by waste hauler.
Unknowns & Incompatible items- lab packed and handled by hazardous waste contractor

3.4 Load Checking

The initial step in load checking is to review incoming loads at the site entrance/scale house. The scale house attendant observes incoming loads for any indication of prohibited wastes. If the scale house attendant encounters suspicious looking loads, he or she will contact an operations supervisor to determine if the waste is acceptable. If prohibited wastes are identified during inspection of a load, the driver is notified that the wastes are not accepted at this site and they are allowed to dump everything but those unaccepted items. The scale house notifies the spotters of the truck number and the type of unacceptable waste that is on its way to the tipping areas, so they can ensure customer compliance.

The next step in the program is checking the vehicle as it dumps its load at the load checking area. Trained personnel survey the load during and after unloading. All known prohibited wastes are identified and segregated from the load. The customer hauls off the unacceptable waste. The customer is given information on how to dispose of the unacceptable waste properly.

The equipment operators are also in a position to survey some of the waste as it is being dumped at the tipping area. The operators push the waste to the compactors. Operators can spot prohibited waste when they are present. If further assessment is needed, a supervisor is notified.

If the scale house attendant or spotter encounters resistance in attempting to reject a load,

he or she will not use force. If resistance is encountered, the attendant will contact a supervisor and will record the truck identification number and/or license plate number. In addition, we may contact the County Sheriff's Office to report the incident immediately.

All individuals involved in the actual load checking will exercise caution to protect themselves, other employees and the public from hazardous materials. This includes, at a minimum, the wearing of gloves, boots and other protective clothing together with not handling hazardous waste if encountered. Although the intent of the Load Checking Program is to prevent the disposal of hazardous waste at solid waste facilities, safety of the employees is always the primary concern/goal.

3.4.1 Type of Loads to be Checked

All loads are subject to the screening process. The disposal workers randomly check loads of both private and commercial haulers.

3.4.2 Frequency of Load Checks

All incoming loads are continuously monitored for the presence of hazardous waste by the scale house attendant. Operations employees will screen a minimum of two loads per week for the commercial haulers. The public will be screened by the spotter. Documentation will be done when time allows. Public loads will sometimes be checked by the load checking crew. This frequency can be increased at the discretion of the operations supervisor.

3.4.3 Report of Findings

Transfer station operations employees will complete the "Hazardous Waste Load Checking Form" for all loads that are screened at the facility, regardless of the content of the load (see Appendix B). This information will be kept on file and reported to the Local Enforcement Agency(LEA) upon request. Every quarter a report will be made to the LEA.

3.4.4 Method of Selecting Loads

The load checking program is conducted randomly. It is the responsibility of the operator to assure that load checks are not performed on the same day of the week or on the same hour of the day. As previously mentioned, both private and commercial haulers are included in the program.

3.5 Contingency Plan

In the event of an accident or accidental discharge of hazardous waste or other ineligible waste, all appropriate personnel (i.e., operator, responsible agencies) will be notified immediately. The subject area will be isolated and secured, and an experienced hazardous waste clean up contractor summoned.

4.0 METHODS FOR DETERMINING WASTE ACCEPTABILITY

4.1 Physical Assessment

One practical means for determining the acceptability of suspicious waste is to examine its product label. Warning labels such as "harmful if inhaled" or "use only in a well-ventilated area" are often useful in identifying the waste type. In some cases, physical signs (odor, color) indicate the presence of a prohibited waste. This observation, coupled with the customer's response to questions, often provides sufficient data to identify the waste.

In physically assessing a waste load, the inspector may note an incompatibility in waste type that draws attention to the part of the load that seems out of place; an example would be one or more 55 gallon drums within a load of residential waste. Once noted, the customer would be questioned, and if needed, additional assessment undertaken.

4.2 Additional Assessment

In some cases the steps outlined above may be insufficient to identify the waste. It is the customer's responsibility to ensure that a waste is permissible before disposal. The load check inspector may require that additional measures be undertaken by the customer at the customer's expense prior to accepting the waste. When this occurs, the customer will be advised to obtain one or more of the following acceptance authorization:

Written clarification by regulatory agencies.
Written clearance from the County of Sonoma, LEA for the Central Landfill
Copy of Manufacturers Safety Date Sheet (MSDS)

4.3 Disposition of Prohibited Wastes

If prohibited wastes are discovered, as a result of any of the waste identification activities

listed above, the customer is informed that such waste cannot be accepted by the facility, it must be removed from the facility premises and arrangements made for their proper disposal.

5.0 ADDITIONAL WASTE ACCEPTANCE CONTROL PROCEDURES

5.1 Signs and Flyers

Signs are currently posted near the site entrance that clearly state the types of wastes not accepted. In addition to the existing signs, flyers with alternatives for hazardous waste disposal and associated phone numbers are available at the scale house.

5.2 Operation by Site Personnel

In addition to observations for hazardous waste that are conducted in the load checking program, the operations personnel are trained and directed to identify potentially prohibited wastes that may be delivered to the site. Equipment operators are also trained to identify prohibited wastes as they are exposed on the tipping area.

5.3 Known Offenders

Special caution will be taken when accepting waste from sources that have previously attempted to deliver hazardous wastes to the site during a random inspection. Precautionary measures will include (1) questioning of the vehicle driver by the scale house attendant and visually inspecting the contents of the load, (2) sorting through the load during unloading, when feasible, (3) additional record keeping of known offender's license plate is kept in the office and (4) the scale house attendants, spotters and supervisors all have knowledge of known repeat offenders. Continued repeat offenders will be banned from the facility and prosecuted to the fullest extent of the law with proper documentation.

5.4 Household Hazardous Waste Collection Program

Sonoma County Waste Management Agency periodically sponsors Household Hazardous Waste Collection Programs.

List of Appendices:

Appendix A - Hazardous Materials Marking, Labeling & Placarding Guide

Appendix B - Hazardous Waste Load Checking Data Sheet.

Appendix C - Master List of Previous Wastes by Classification.

Appendix D - DOT/State/Federal Cross Referencing Chart

APPENDIX A

HAZARDOUS MATERIAL MARKING, LABELING & PLACARDING GUIDE

U.S. Department of Transportation

Research and Special Programs Administration

DOT

Hazardous Materials Marking, Labeling & Placarding Guide

This Marking, Labeling and Placarding Guide will assist shippers, carriers, fire departments, police, emergency response personnel, and others in complying with, and enforcing the regulations governing the safe transport of hazardous materials by highway, rail, water and air.

The information and illustrations presented in this Guide are intended to serve as an introduction to regulations governing hazardous materials transportation. The Guide should be read in conjunction with the Hazardous Materials Regulations (HMR; 49 CFR 100-199). Published annually, and amended periodically, the HMR are the key to compliance and contain the information needed to comply with the requirements for the safe transport of hazardous materials.

Hazardous materials markings, labels, placards, and shipping papers serve to communicate the hazards posed by materials in transportation. Hazard communication is the key to effective emergency response, and is also used to alert transportation workers and the general public of the presence of hazardous materials, insure that non-compatible materials are not loaded together in the same transport vehicle, and provide the necessary information for reporting hazardous materials incidents. The purpose of this Guide is to explain and identify the markings, labels and placards which appear on packages, freight containers and transport vehicles containing hazardous materials.

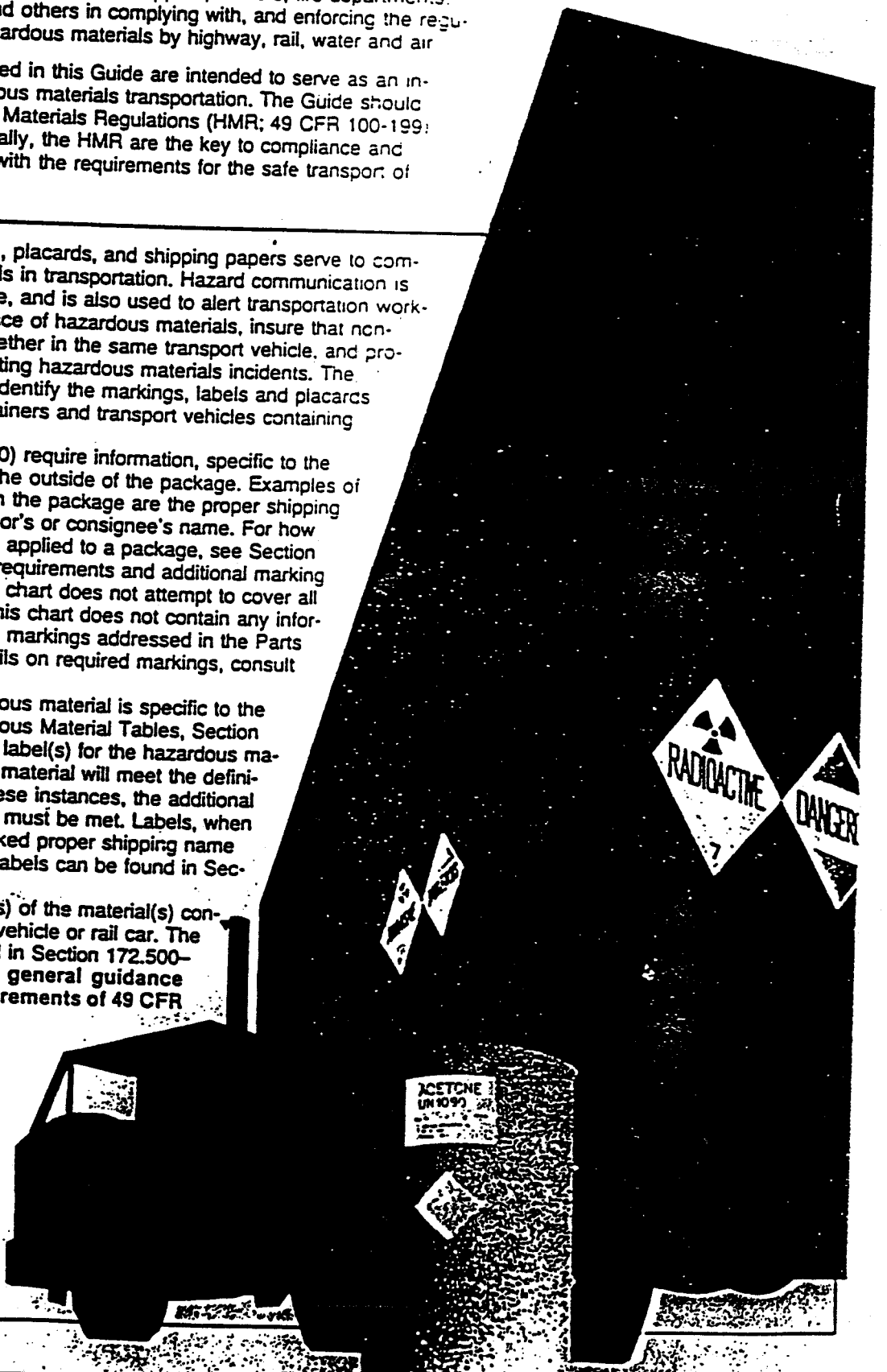
Marking regulations (Section 172.300) require information, specific to the hazardous material, to be "marked" on the outside of the package. Examples of the information required to be marked on the package are the proper shipping name, identification number and consignor's or consignee's name. For how markings required by the HMR are to be applied to a package, see Section 172.304. For exceptions to the marking requirements and additional marking requirements, see Section 172.300. This chart does not attempt to cover all the marking requirements. In particular this chart does not contain any information related to specification packaging markings addressed in the Parts 178 and 179 of 49 CFR. For further details on required markings, consult the appropriate sections in the HMR.

The Labeling of a package of hazardous material is specific to the hazard class of the material. The Hazardous Material Tables, Section 172.101 and 172.102, identify the proper label(s) for the hazardous material listed. In some cases, a hazardous material will meet the definition of two or more hazard classes. In these instances, the additional labeling requirements of Section 172.402 must be met. Labels, when required, must be placed next to the marked proper shipping name (Section 172.406). The requirements for labels can be found in Section 172.400–172.450.

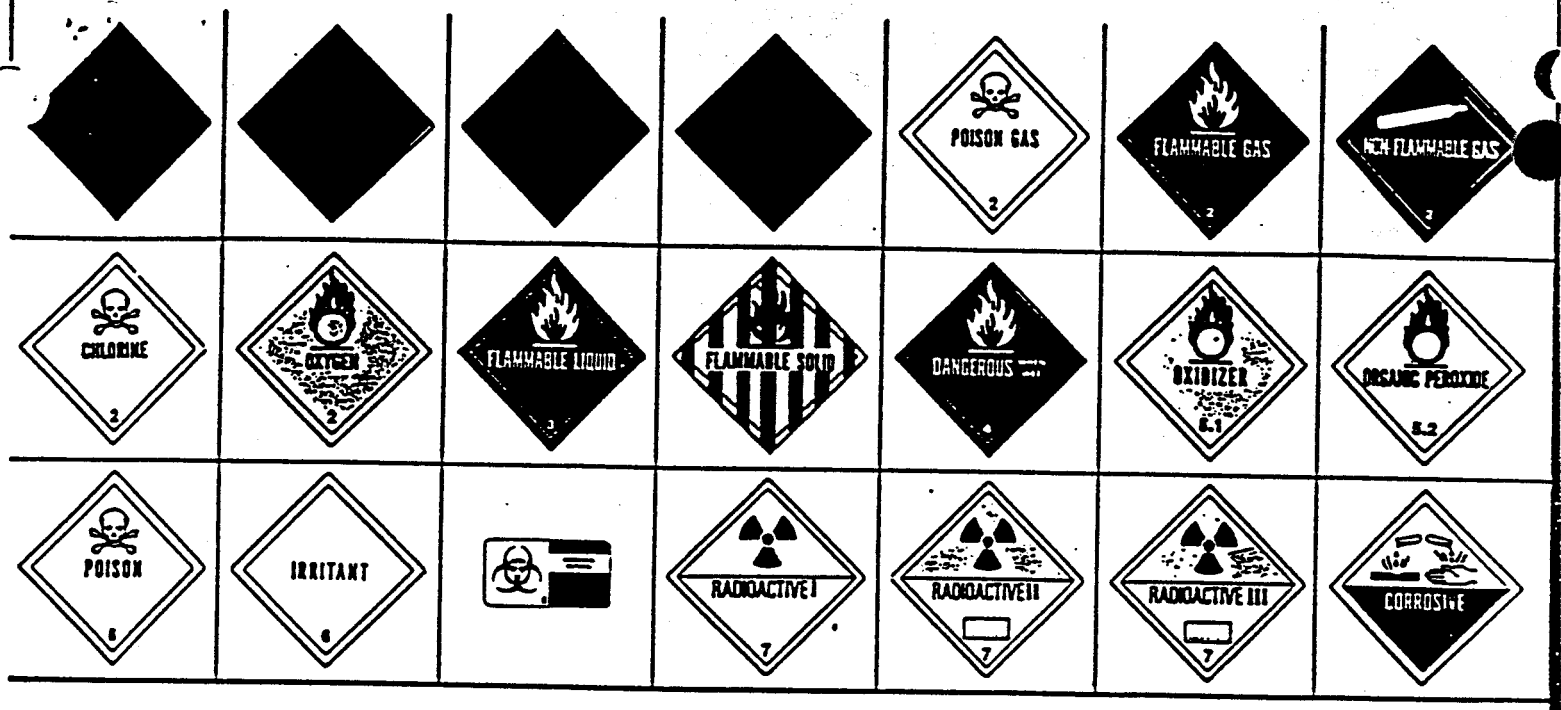
Placards represent the hazard class(es) of the material(s) contained within the freight container, motor vehicle or rail car. The requirements for placarding are contained in Section 172.500–172.558. **NOTE: This document is for general guidance only and is not a substitute for the requirements of 49 CFR 100–199.**

Response begins with identification.

A transport vehicle carrying 1 package of Radioactive Material labeled Yellow III, 300 pounds of Flammable Liquid and 600 pounds of Corrosive Materials would be placarded with both RADIOACTIVE and DANGEROUS placards.



DOMESTIC LABELING



General Guidelines on Use of Labels

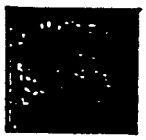
(CFR, Title 49, Transportation, Parts 100-177)

- Labels illustrated above are normally for *domestic shipments*. However, some air carriers *may* require the use of International Civil Aviation Organization (ICAO) labels.
- Domestic Warning Labels *may* display UN Class Number, Division Number (and Compatibility Group for Explosives only) [Sec. 172.407(g)].
- Any person who offers a hazardous material for transportation MUST label the package, if required [Sec. 172.400(a)].
- The Hazardous Materials Tables, Sec. 172.101 and 172.102, identify the proper label(s) for the hazardous materials listed.
- Label(s), when required, must be printed on or affixed to the surface of the package near the proper shipping name [Sec. 172.406(a)].
- When two or more different labels are required, display them next to each other [Sec. 172.406(c)].
- Labels may be affixed to packages (even when not required by regulations) provided each label represents a hazard of the material in the package [Sec. 172.401].

Check the Appropriate Regulations
Domestic or International Shipment

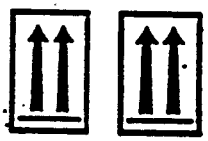
Additional Markings and Labels

HANDLING LABELS



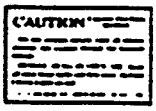
Cargo Aircraft Only
172.402(b)

172.316



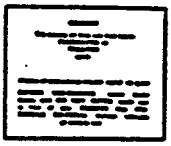
Package Orientation Markings

172.312(a)(c)

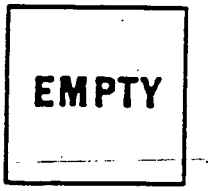


Bung Label
172.402(e)

173.25(a)(4)



Fumigation
173.9



173.427

Here are a few additional markings and labels pertaining to the transport of hazardous materials. The section number shown with each item refers to the appropriate section in the HMR. The Hazardous Materials Tables, Section 172.101 and 172.102, identify the proper shipping name, hazard class, identification number, required label(s) and packaging sections.

Poisonous Materials

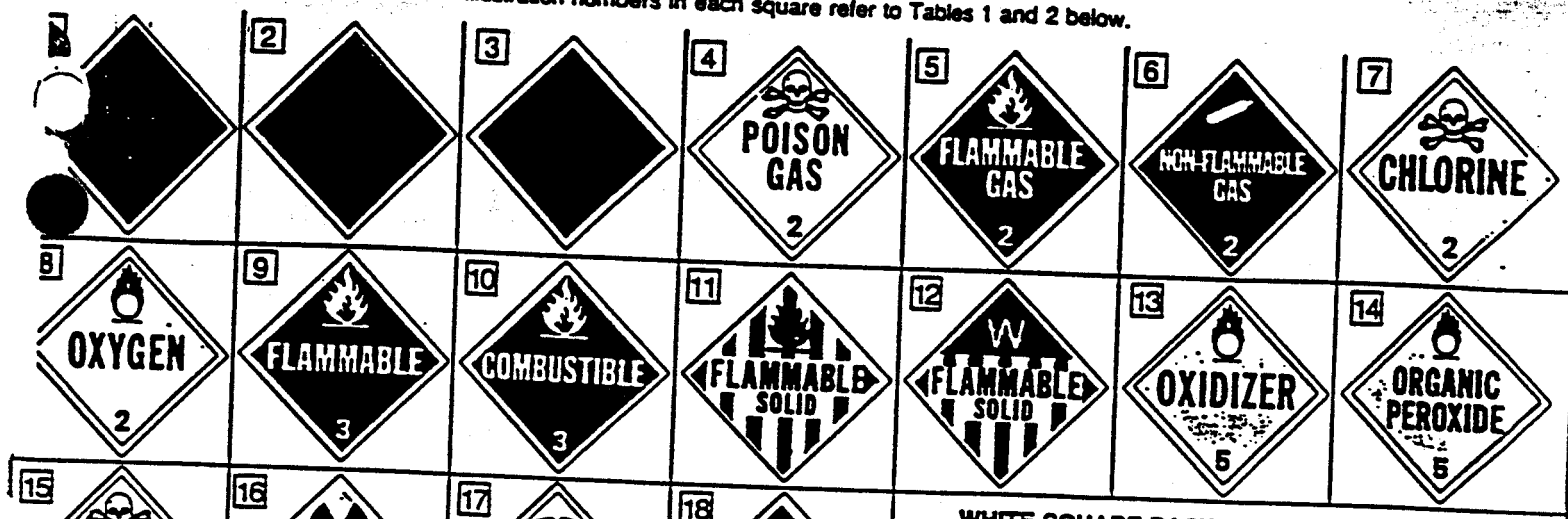
172.505

172.301

Materials which meet the inhalation toxicity criteria specified in Section 173.3a(b)(2), have additional "communication standards" prescribed by the HMR. First, the words "Poison-Inhalation Hazard" must be entered on the shipping paper, as required by Section 172.203(k)(4), for any primary capacity units with a capacity greater than one liter. Second, packages of 110 gallons or less capacity must be marked "Inhalation Hazard" in accordance with Section 172.301(a). Lastly, transport vehicles, freight containers and portable tanks subject to the shipping paper requirements contained in Section 172.203(k)(4) must be placarded with POISON placards in addition to the placards required by Section 172.504. For additional information and exceptions to these communication requirements, see the referenced sections in the HMR.

Keep a copy of the DOT Emergency Response Guidebook handy!

...ification numbers in each square refer to Tables 1 and 2 below.



WHITE SQUARE BACKGROUND FOR PLACARD

HIGHWAY

- Used for "HIGHWAY ROUTE CONTROLLED QUANTITY OF RADIOACTIVE MATERIALS." (Sec. 172.507)

RAIL

- Used for RAIL SHIPMENTS "EXPLOSIVE A," "POISON GAS" and "POISON GAS RESIDUE" placards. (Sec. 172.510(a))

Guidelines

(CFR, Title 49, Transportation, Parts 100-177)

- Placard any transport vehicle, freight container, or rail car containing any quantity of material listed in Table 1.
- Materials which are shipped in portable tanks, cargo tanks, or tank cars must be placarded when they contain any quantity of Table 1 and/or Table 2 material.
- Motor vehicles or freight containers containing packages which are subject to the "Poison-Inhalation Hazard" shipping paper description of Section 172.203(k)(4), must be placarded POISON in addition to the placards required by Section 172.504 (see Section 172.505).
- When the gross weight of all hazardous material covered in TABLE 2 is less than 1000 pounds, no placard is required on a transport vehicle or freight container.
- Placard freight containers 640 cubic feet or more containing any quantity of hazardous material classes listed in TABLES 1 and/or 2 when offered for transportation by air or water (see Section 172.512(a)). Under 640 cubic feet see Section 172.512(b).

TABLE 1

Hazard Classes	No.
Class A explosives	1
Class B explosives	2
Poison A	4
Flammable solid (DANGEROUS WHEN WET label only)	12
Radioactive material (YELLOW III label)	16
Radioactive material:	
Uranium hexafluoride fissile (Containing more than 1.0% U^{235})	16 & 17
Uranium hexafluoride, low-specific activity (Containing 1.0% or less U^{235})	16 & 17

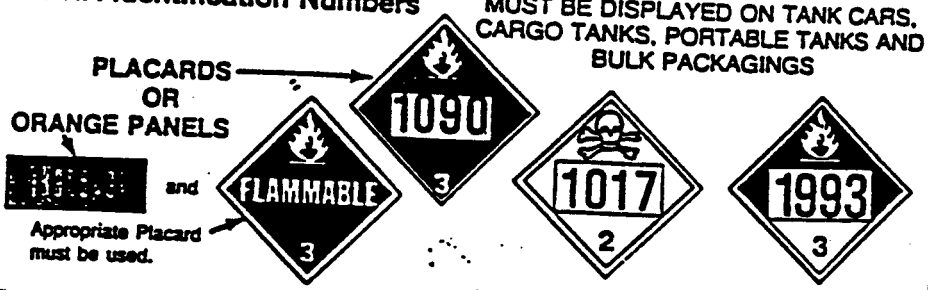
Note: For details on the use of Tables 1 and 2, see Sec. 172.504 (see footnotes at bottom of tables.)

TABLE 2

Hazard Classes	No.
Class C explosives	18
Blasting agent	3
Nonflammable gas	6
Nonflammable gas (Chlorine)	7
Nonflammable gas (Fluorine)	15
Nonflammable gas (Oxygen, cryogenic liquid)	8
Flammable gas	5
Combustible liquid	10
Flammable liquid	9
Flammable solid	11
Oxidizer	13
Organic peroxide	14
Poison B	15
Corrosive material	17
Irritating material	15

UN or NA Identification Numbers

MUST BE DISPLAYED ON TANK CARS, CARGO TANKS, PORTABLE TANKS AND BULK PACKAGINGS



- When hazardous materials are transported in Tank Cars (Section 172.330), Cargo Tanks (Section 172.328), Portable Tanks (Section 172.326) or Bulk Packagings (Section 172.331), UN or NA numbers must be displayed on placards, orange panels or, when authorized, plain white square-on-point configuration.
- UN (United Nations) or NA (North American) numbers are found in the Hazardous Materials Tables, Sections 172.101 and 172.102.
- Identification numbers may not be displayed on "POISON GAS," "RADIOACTIVE," or "EXPLOSIVE A," "EXPLOSIVE B," "BLASTING AGENTS," or "DANGEROUS" placards. (See Section 172.334.)
- In lieu of the orange panel, identification numbers may be placed on plain white square-on-point configuration when there is no placard specified for the hazard class (e.g., ORM-A, B, C, D, or E) or where the identification number may not be displayed on the placard. See Section 172.336(b) for additional provisions and specifications.
- When the identification number is displayed on a placard the UN hazard class number must be displayed in the lower corner of each placard (see Section 172.332 (c)(3)).
- Specifications of size and color of the Orange Panel can be found in Section 172.332(b).
- NA numbers are used only in the USA and Canada.

Additional Placarding Guidelines

A transport vehicle or freight container containing two or more classes of material requiring different placards specified in Table 2 may be placarded DANGEROUS in place of the separate placards specified for each of those classes of material specified in Table 2. However, when 5000 pounds or more of one class of material is loaded therein at one loading facility, the placard specified for that class must be applied. This exception, provided in Section 172.504(b), does not apply to portable tanks tank cars, or cargo tanks.

CAUTION: Check each shipment for compliance with the appropriate hazardous materials regulations — Proper Classification, Packaging, Marking, Labeling, Placarding, Documentation — prior to offering for shipment.

In an emergency, call Chemtrec, 1-800-424-9300

The shipment of hazardous materials internationally is governed by one or more regulatory bodies with regulations that may be similar to domestic regulations or radically different. Canada, for example, has adopted wordless placards and labels because their country is bilingual. Canada also requires cargo and rail tanks to use retro-reflective placarding. However, Canada and the United States have reciprocity regarding the use of wordless and worded placards and labels.

Several international organizations govern the transportation of hazardous materials according to the mode of transportation. If a shipment is going by water, the International Maritime Organization (IMO) has authority. The International Civil Aviation Organization (ICAO) is concerned about the safe shipment of dangerous goods (*i.e.*, hazardous materials) by air. Transport Canada (TC) is the Canadian counterpart to the U.S. Department of Transportation (DOT).

The United Nations publishes "Recommendations for the Transport of Dangerous Goods," a publication that is used by many nations of the world when promulgating regulations. Since the safe transport of hazardous materials is of concern to people everywhere, the work done by the United Nations is of critical importance world-wide. Labels and placards used in the Canadian, IMO, and ICAO regulations are generally based on the U.N. Recomendations, although Canada has some labels and placard designs that vary from the U.N. White borders are optional on International Placards.

Examples of Wordless Placards and Labels

Pictured here are typical wordless placards and labels required for use in Canada and many other countries around the world.

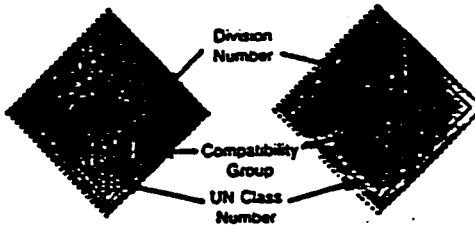
Examples of International and Canadian Placards and Labels

Spontaneously Combustible and Keep Away From Food placards and labels are used internationally and in Canada. The Corrosive Gas placard and label are used exclusively in Canada. Most placards and labels used internationally are similar (color and symbols) to those required by DOT regulations.

UN Class Numbers

Class 1: Explosives
Class 2: Gases (compressed, liquified or dissolved under pressure
Class 3: Flammable liquids
Class 4: Flammable solids or substances
Class 5: Oxidizing substances. Division 5.1 Oxidizing substances or agents. Division 5.2, Organic peroxides.
Class 6: Poisonous and infectious substances
Class 7: Radioactive substances
Class 8: Corrosives
Class 9: Misc. dangerous substances

Examples of Explosive Labels



The Numerical Designation represents the Class or Division. Alphabetical Designation represents the Compatibility Group (for Explosives only). Division Numbers and Compatibility Group combinations can result in over 30 different "Explosives" labels (see IMDG Code/ICAO).

For complete details, refer to one or more of the following:

- Code of Federal Regulations, Title 49, Transportation. Parts 100-199. [All modes]
- International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air [Air]
- International Maritime Organization (IMO) Dangerous Goods Code [Water]
- "Transportation of Dangerous Goods Regulations" of Transport Canada. [All Modes]

U.S. Department of Transportation
Research and Special Programs Administration
Copies of this Chart can be obtained by writing OHMT/DHM-51, Washington, D.C. 20590.

PESTICIDES

A PESTICIDES DISPLAYING THE FOLLOWING STATEMENT ON THE PRODUCT CONTAINER

RESTRICTED USE PESTICIDE

FOR RETAIL SALE TO AND APPLICATION ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION

B CALIFORNIA RESTRICTED MATERIALS

TRADE NAMES ARE USED IN THE INTEREST OF SIMPLICITY. OTHER PRODUCTS WITH THE SAME COMPOUND AS AN ACTIVE INGREDIENT ARE ALSO SUBJECT TO THESE PERMIT REQUIREMENTS. REFER TO THE CALIFORNIA CODE OF REGULATIONS TITLE 3, SECTION 6400.

ACROLEIN FOR USE AS AN AQUATIC HERBICIDE
ALL DUST (EXCEPT THOSE PRODUCTS CONTAINING ONLY EXEMPT PESTICIDES)*
ANTIFOULING PAINTS OR COATINGS CONTAINING TRIBUTYLTIN*
ANY PESTICIDE USED PURSUANT TO A SECTION 18 EMERGENCY EXEMPTION
ALDRIN*
AVITROL
AZODRIN
BENTAZON FOR RICE
[illegible]
[illegible]IN
BOLERO
CADMIUM CONTAINING PESTICIDES*
CALCIUM CYANIDE
CARBON BISULFIDE
CARBON TETRACHLORIDE
CHLORDANE*
CHLOROPICRIN
COMPOUND 1080
DASANIT
DDD
DDT
DEF/FOLEX
DICAMBA
DIELDRIN*
DINOSEB
DI-SYSTON*
EDB
EDC
ENDRIN
ENDRIN TREATED CONIFER SEEDS
EPN
ETHION
FURADAN
GALECRON/FUNDAL
GUTHION
HEPTACHLOR*
INORGANIC ARSENICALS OTHER THAN SODIUM ARSENITE*
LANNATE/NUDRIN*
LINDANE*
MCPA
METASYSTOX-R
METHYL BROMIDE
METHYL PARATHION
MERCURY CONTAINING PESTICIDES*
MERCURY TREATED SEEDS
MOCAP
MONITOR
NEMACUR
OMPA
ORDRAM
PARAQUAT
PARATHION
PHOSDRIN
PHOSPHAMIDON
PHOSTOXIN
PICLORAM
PROPANIL
SEVIN*
SILVEX
SODIUM CYANIDE
SODIUM ARSENITE
STARLICIDE
STRYCHNINE*
SULFOTEPP
SYSTOX
SUPRACIDE
TELONE (DD)
TEMIK
TEPP
THIMET
THIODAN*
TOK
TORAK
TOXAPHENE*
TRITHION
ZINC PHOSPHIDE
2,4-D
2,4-DB
2,4-DP
2,4,5-T
2,4-DINITROPHENOL
4,6-DINITRO-O-CRESOL

APPENDIX B

HAZARDOUS WASTE LOAD CHECKING DATA SHEET

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
SANTA ROSA, CALIFORNIA 95403
CALIFORNIA

COUNTY OF SONOMA
DEPARTMENT OF PUBLIC WORKS
REFUSE DISPOSAL

COUNTY OF SONOMA
PUBLIC WORKS
HHW
HAZARDOUS WASTE INSPECTOR
REFUSE OPERATION DIVISION

DISPOSAL FACILITY
HAZARDOUS WASTES SCREENING REPORTING FORM – COMMERCIAL

Date _____ Time _____ Facility _____

Vehicle License No. _____ Type of Vehicle _____

Driver's Name _____ Route # _____

Firm/Company Name _____ Telephone # _____

Firm/Company Address _____

Action Taken _____

Hazard	Description Chemical Name or Other	Quantity	(C)ubic Yds (G)allons (P)ounds (O)unces	(L)iquid (S)olid (G)as

Comments: _____

_____

Completed By: _____

DIST: WHITE – REFUSE DIV. / CANARY – FIRM

GTO

HOUSEHOLD HAZARDOUS WASTE
PUBLIC LOAD CHECKS

SITE:	DATE:	NAME:

	TYPE OF VEHICLE				NO HHW	HAULER REMOVED (LIC #)	TYPE OF WASTE (REMARKS)
#	TRUCK	CAR	VAN	TRAILER			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

APPENDIX C

MASTER LIST OF PREVIOUS WASTES BY CLASSIFICATION

ACIDS

Waste Corrosive Liquid, N.O.S. (Hydrochloric, Sulfuric acid) 8, UN 1760, PG II

Waste Corrosive Solid, N.O.S. (Boric acid, Zinc chloride) 8, UN 1759, PG III

Product Name	Use	EH	Components
Ladco, Roach Prufe, Whiteworth, Antrol, VWR,	Roach Killer	N	Boric acid
Willard Muriatic Acid, Parks, Ked, Brie Nu, Sore Klean, Jasco, Chase, Sunny Side	Cleaner	Y	Hydrochloric acid
Ro Go, Clear Through, Quale, Westlake	Drain opener	N	Sulfuric acid
ED Fred	Shower & tile	N	Phosphoric acid
Aqua Chem Poolcare	Lowers pH	Y	Hydrochloric acid
Muriatic Acid 20	Brick cleaner	Y	Hydrochloric acid
Green All Bone Meal	Fertilizer	N	Phosphoric acid
Robinsons Anpack Drugs	Wound cleaner	N	Boric acid
Naval Jelly, Duro, Portex, Afta, Rust Mort, Espree Bloom, Aluminum Jelly, Chacon, Iron Cleaner, Galva Wash	Rust dissolver	N	Phosphoric acid
Rust Treatment	Rust remover	N	Phosphoric acid
Klix Porcelain & Tile Cleaner	Tile cleaner	N	Phosphoric acid
Shower Power (Chemifax)	Shower cleaner	N	Phosphoric acid
Fuller Extrastrength Bowl Cleaner	Toilet cleaner	Y	Hydrochloric acid
Chacon 0-10-10 Plant Fertilizer	Plant food	N	Phosphoric acid, Potassium chloride
Amco, Superior Flux Co., No Korode Soldering Flux	Soldering agent	N	Zinc chloride
ZUD, Wilmor	Metal cleaner	N	Oxalic acid
Custom Wood Bleach	Wood bleach	N	Oxalic acid
Precise African Violet Food, Liquinox Acid Plant Food	Plant food	N	Phosphoric acid, Urea, Muriate of potash
Chacon, All Purpose Fertilizer	Plant fertilizer	N	Phosphoric acid, Urea, Potassium chloride
Mechanics Carburetor Cleaner	Parts cleaner	N	Cresylic acid, Petroleum distillates, Methylene chloride, Dichlorobenzene
Cookes Hormone	Plant hormone	N	1-Naphthalene, Acetic acid
Lime Away Toilet Bowl, Lysol Toilet Bowl Cleaner	Toilet cleaner	Y	Hydrochloric acid, Didecyl dimethyl, Ammonium chloride
Chacon Liquid Iron & Zinc	Plant food	N	[illegible]

ACIDS

Product Name	Use	EH	Components
Ked Rust Remover	Rust remover	Y	Hydrochloric acid, Phosphoric acid, Ethylene glycol, Butyl ether
Bric Nu	Concrete, tile, brick etch	Y	Hydrochloric acid, Ethyl glycol, Acetate
Mechanic Carburetor & Parts	Car parts cleaner	N	Methylene chloride, Orthodichlorobenzene, Cresylic acid, Petroleum distillates
Lime Away	Lime & scale remover	N	Phosphoric acid, Hydroxyacetic acid
Lime Away Extra Strength	Toilet cleaner	Y	Didecyldimethylammonium chloride, Hydrochloric acid
Connoisseur	Jewel cleaner	N	Alkylammonium compound, Sodium benzoate, Ethylacetate
Liquinox Iron & Zinc	Plant food	N	Iron & Zinc sulfate, Naphthalene, Acetic acid
Lysol Cling	Toilet bowl	N	Nonionic, Cationic surfactants, Oxalic acid
X-14 Soapscum	Soap scum remover	N	Pine oil, Ethylene glycol, Monobutylether, Oleic Acid
Jasco	Pretreat for wood refinishing	N	Phosphoric acid, Alcohol
Chemifax	Tub tile cleaner	N	Phosphoric acid, Methyl salicylate
Liquinox Start	Fertilizer	N	Naphthalene acetic acid, Chelated iron, Phosphate
Citrus & Avocado Fertilizer Chelated	Fertilizer	N	Urea, Phosphoric acid, Muriate of potash, EDTA
Cha-Kem-Co Liquid Iron & Zinc	Fertilizer	N	Iron & Zinc sulfate, Dipotassium, EDTA, Potash
Berryman B-9 Chem Dip	Carburetor cleaner	N	Cresylic acid, Perchloroethylene

FLAMMABLES

Waste Poisonous Solid, N.O.S. (Arsenic trioxide, Sodium arsenate, Mercuric chloride) 6, UN 2810, PG II

Product Name	Use	EH	Components
Inorganic Poisons			
Antrol	Ant traps	Y	Sodium arsenate
Kodak Sepia Toner	Photochemicals	Y	Sodium selenite
Triox Weed Killer	Herbicide	Y	Arsenic trioxide, Sodium arsenite
Ortho Earwig Bait	Earwig killer	N	Sodium fluosilicate
Flotox (Ortho) Garden Sulfur	Mildew remover	N	Sulfur
Larvex	Insecticide	N	Sodium aluminum silicofluoride
Mercury Containing Compounds			
Semesan	Paint additive	Y	Hydroxymercurichlorophenol
Miller's Paraspra	Paint additive	Y	Phenyl mercuri triethanol, Ammonium lactate
Mallinckrodt	Reagent	Y	Mercuric chloride
Super Ad It	Paint additive	Y	Di(phenylmercury), Dodecentlsuccinate
Kodak	Specialized photochemicals	Y	Mercuric chloride
Cyanides			
Hach	Gopher killer	Y	Sodium cyanide
Cyani-kill, Cyano-gas	Gopher killer	Y	Calcium cyanide
Pure Silver Plate	Electroplate solution	Y	Sodium cyanide
Solid Organic Poisons			
Repel Dog & Cat Repellant	Repellant	N	Paradichlorobenzene, Alkylpyridines, Ziram, Thiram
DuPont Ferbamate	Fungicide	N	Ferbam
Corry's Slug-N-Snail Granules	Insecticide	N	Metaldehyde, Carbaryl
Rose Fungicide	Fungicide	Y	Cycloheximide
Pestmaster, Richfield, Roach Master, Blackleaf, Thripocide, Stay Dee, Scale O Kill, Pesirol, Pest B Gon, Procon, Niatox, So Long Fly	Pesticide	N	DDT
Flit	Bug bait	N	DDT, Isobornylthiocyanoacetate terpenes
Chacon Spruge & Oralis Control	Herbicide	N	Sodium thiocyanide

FLAMMABLES

Product Name	Use	EH	Components
Deadline for Slug & Snails	Insecticide	N	Metaldehydes
Ortho-Klor 44	Insecticide	Y	Chlordane, Petroleum distillates
Ortho-Klor 10	Pesticide	Y	Chlordane, Octachloromethanotetrahydroindane
Ortho Bug-Getta Pellets	Pesticide	Y	Dieldrin, Metaldehyde
Cook Benomyl Systemic Fungicide	Fungicide	N	Benomyl
Raid, Dexol, Fleatrol, Spectracide, Lawn Insect Spray	Insecticide	N	Chlorpyrifos
Sears Moth Ice, Waterproof	Moth repellant	N	Para-dichlorobenzene or Naphthalene
Vetchem, Double Chacon, Ortho, Zodiac, Hartz, Mycodex Powder	Insecticide	N	Carbaryl
Earwig Roach, Raid, Ant Barrier	Insecticide	N	2-Methyl(ethoxy)phenolmethylcarbamate
Dog Off	Dog repellant	N	N,N-Diethyl-Meta-Toluamide
Ortho Rose Dust	Pesticide	Y	Phaltan, Lindane, DDT, Sulfur

FLAMMABLES

Waste Flammable Liquid, Poisonous, N.O.S. (Petroleum stillates, Pyrethrins, Chlordane) 3, UN 1992, PG II

Product Name	Use	EH	Components
Chacon Bordol	Fungicide	N	Copper sulfate, Petroleum oil
Phisohex	Soap	N	Lanolin, Petrolatum, Hexachlorophene
Ortho Rose & Flower Insect Killer	Pesticide	N	Piperonyl butoxide, Pyrethrins, Petroleum distillates
Black Leaf 40	Fungicide	N	Nicotine sulfate solution
Black Flag Insect Spray	Pesticide	N	DDT, Methylated naphthenates, Betabutoxybetathiocyanodiethylether, Petroleum distillates
49er Gold Strike Bonanza Plant Spray	Fungicide	N	Pyrethrins, Ethylenedichloride, Copperoleate, Iron, Zinc & Manganese Octoates
Scale-O-Kill	Fungicide	N	Cyclohexanone, Malathion, Petroleum distillates
Ortho Funginex Rose Disease Control	Fungicide	N	Triforine, Petroleum distillates
Tropic Zone Insect Spray	Pesticide	Y	DDT, Lindane, Chlordane, Petroleum distillates
Ortho Klor, Chacon Klor	Pesticide	Y	Chlordane, Petroleum distillates
Ortho Greenol Liquid Fungicide	Fungicide	N	Copperoleate, Petroleum distillates
Watkins Fly & Moth Spray	Pesticide	N	DDT, Pyrethrum
Ortho Isotox Insect Spray	Pesticide	N	Carbaryl
Willard Q.P.	Wood Preservative	N	Creosote
Ortho Rix Spray, Sears Fungicide	Fungicide	N	Calcium polysulfides, Petroleum distillates
Copper Green, Jasco Termin-8 Green, Coppernate 250	Wood Preservative	N	Copper naphthenate, Petroleum distillates
Dexol Systemic House Plant Insecticide	Insecticide	Y	Di-Syston, Petroleum distillates
Cabot's Decking Stain	Wood Preservative	N	Bis(tributyltin) oxide, Folpet, Petroleum distillates
Black Leaf Thuricide	Insecticide	N	Bacillus thuringinsis berliner, Petroleum distillates
Orthorix, Dormant Disease, Rix Spray	Fungicide	N	Calcium polysulfide, Petroleum distillates, Dexol
Ortho, Chacon, Rose Flower, 49er, Cooke, Scale Control, Black Flag	Insecticide	N	Malathion, Petroleum distillates

FLAMMABLES

Product Name	Use	EH	Components
Raid, Ortho, Hartz, Bowman, Tpots, Wonder Fluff, Schultz, Sla, VetKem, Magic Coat, Supra Coat, Bif	Insecticide	N	Piperonyl butoxide, Pyrethrins
Cuprinol, Copper Green, Jasco Clear Wood, Ace	Wood preservative	N	Copper napthenate, Zinc napthenate, Petroleum distillates
KXL, 49er, Du-O-Cide, Bordoi	Fungicide	N	Copper oleate, Pyrethrins, Petroleum distillates
Jasco, Willard, E.S., Atco, Marvir, Stadco, Beeco	Wood preservative	N	Creosote
Kleenup, Ortho	Herbicide	N	Isopropylamine salt of glyphosate
Dioxin Precursors			
Penta Treat 300	Wood preservative	N	PCP, Petroleum distillates
Ortho Weed B Gone	Herbicide	Y	Butox, Propylester of 2,4,5 Trichlorophenoxyacetic acid (2,4,5-T)
Vigoro Lawn Weed Killer	Herbicide	Y	2,4,5-T
Chacon Weed-O-Kill	Herbicide	N	PCP, Prometon
Weedone	Herbicide	Y	2,4-D, 2,4,5-T

FLAMMABLES

Waste Flammable Solid, N.O.S. (Roofing tar, Adhesives, Grease) 4.1, UN 1325, PG III

Product Name	Use
Grease, Gasket Lube	Lubication
Joint Compound	Sealnt
Lap Cement	Adhsive
Wallpaper Adhesive	Adhsive
Spackling Paste	Wall repair
Concrete Adhesive, Ceramic Adhesive	Adhesive
Wax	Wax
Wood Patch	Sealant
Pipe Joint	Sealant
Elastic Seam	Adhesive
Liquid Masking Tape	Glue
Plastic Resin Glue	Glue
Glazing	Sealant
Paint Resin	Dried paint
Caulk	Sealant
Furnace Cement	Cement
Putty	Putty
Adhesive Grout	Adhesive sealant
Rust Remover	Rust remover
Tile Mastic	Adhesive
Pruning Seal	Tree sealant
Powder Paint	Paint
Auto Filler	Filler
Wet Patch	Patch
Dried Ink	Ink
Roofing Tar	Tar
Silicone	Filler
Liquid Plastic	Adhesive

BASES

Waste Oxidizing Substances, Liquid, Corrosive, N.O.S. (Sodium hypochlorite, Alkylammonium compounds, Organic surfactants) 5.1, UN 3098, PG II

Waste Oxidizing Substances, Solid, Corrosive, N.O.S. (Calcium hypochlorite, Sodium hydroxide), 5.1, UN 3085, PG II

Waste Oxidizing Substances, Liquid, N.O.S (Hydrogen peroxide, Potassium permanganate, Water) 5.1, UN 3139, PG II

Waste Oxidizing Substances, Solid, N.O.S. (Sodium metaborate, Sodium chlorate) 5.1, Un 1479, PG II

Product Name	Use	EH	Components
Hypochlorites			
X-14 Instant Mildew Remover, Tilex	Mildew remover	Y	Sodium hypochlorite, Sodium carbonate, Sodium bicarbonate
Drano	Drain cleaner	N	Sodium nitrate, Sodium hydroxide
Clorox, X-14, Tilex Mildew, Easy Off, 20 Mule Kick	Bleach, mildew remover	Y	Calcium hypochlorite, Sodium hydroxide
Chacon Stump	Stump remover	N	Potassium nitrate
Liquid Plummer	Drain cleaner	Y	Sodium hypochlorite, Sodium metasilicate
Nitrates			
Dexol Stump Remover, Chacon, Science Stump Remover	Stump killer	N	Potassium nitrate, Sodium hydroxide
Drano	Drain cleaner	N	Sodium hydroxide, Potassium nitrate
Osmacote	Super oxygenating fertilizer	N	Ammonium nitrate, Ammonium phosphate, Calcium phosphate
Miracle Grow, Supersoil, Atlas, Schultz, African Violet Food, Spoonit, Green Sweep, Plant Tabs, Wodelizer, Stim-U-Plant	Fertilizer	N	Ammonium phosphate, Potassium nitrate, Urea
Basic Oxidizers			
Monobor	Cleaner	N	Sodium metaborate, Tetrahydrate, Sodium chlorate
Border line	Deer repellant	N	Sodium metaborate, Sodium chlorate

BASES

Product Name	Use	EH	Components
Neutral Oxidizers			
Longs	Topical antibacterial	N	Hydrogen peroxide, Water
Kodak Paper Bleach, Bleach Brown, Sepia Toner, Photo Part B; Lauder CP-5	Photochemicals	N	Potassium ferricyanide
Jasco, Spe-De-Way, Walgreens	Wood bleach	N	Hydrogen peroxide
Solidox Pellets	Welding gun pellets	N	Sodium chlorate

Waste Organic Peroxide, type F, Solid, 5.2, UN 3110, PGII

Product Name	Use	EH	Components
Oxygen Plus	Fertilizer	N	Urea hydrogen peroxide, Urea, Ammonium phosphate, Potassium phosphate, Potassium hydroxide
Hardener for Polyester Resin	Hardener	N	MEK Peroxide
Oxy 5, Oxy Clear	Blemish cream	N	Benzoyl peroxide
Nice N Easy	Hair colorant	N	Hydrogen peroxide, Ethyl glucol acetate
Cream Hardener	Auto body filler catalyst	N	Benzoyl peroxide, Butyl benzyl phthalate
Wood Filler	Wood filler catalyst	N	Benzoyl peroxide

BASES

Waste Corrosive Liquid, N.O.S. (Ammonia, Sodium metasilicate, Organc surfactants) 8, UN 1760, PG II

Waste Corrosive Solid, N.O.S. (Sodium hydroxide, Trisodium phosphae, Calcium carbonate) 8, UN 1759, PG III

Product Name	Use	EH	Components
Goodwins	Cleaner	N	Ammonia
Lewis Lye, Red Devil, Mule Kick	Drain opener	N	Sodium hydroxde
Bruce 5 Minute Stripper	Wax remover	N	Sodium ortho slicate
Easy Off, Oxford, Lye, Babbit	Cleaner	N	Sodium hydroxide
Serco	Degreaser	N	Sodium hydroxide
Amway Oven Cleaner	Oven cleaner	N	Sodium hydroxide
Spe-De-Way Part B	Wood bleach	N	Sodium hydroxide
Kodak	pH check	N	Sodium hydroxide
Guardex pH Stabilizer	Pool chemicals	N	Sodium sesquicarbonate
Chacon Brush & Stump Killer	Stump killer	N	Ammonium sulfamate
Amway Wax Remover, DIY Sava Brush	Wax remover	N	Sodium metasilicate
Univer 3, Hardness Reagent	Hardener	N	Sodium carbonate Sodium sulfite
Car Bo Tet Cleaning Crystals	Dry cleaning solvent	N	Sodium carbonate, Phosphate-hydroxide
Synco, Standard Brands, Willard	Wall cleaner	N	TSP (Trisodium phosphate)
Peelaway	Paint peeler	N	Sodium hydroxide
Jasco Wood Bleach, Willard, Formby	Wood bleach	N	Sodium silicate, Sodium metasilicate
Flood Garage Floor & Driveway	Asphalt cleaner	N	Sodium metasilicate
Perform, Drain Pipe, Parsons, USP, Aqua	Cleaner	N	Ammonia
Kodak Activator & Developer, Lauder, Rodinal, Agfa, 3M	Photochemicals	N	Potassium bicarbonate, Potassium hydroxide, Potassium Aluminum, Sodium metaborate, Ammonium thiosulfate, Ammonium bromide, Sodium thiosulfate, Sodium sulfate
Fertilizers, Chacon, K-Grow	Plant food	N	Ammonium phosphate, Potassium chloride, Hydroxide, Zinc, Iron, Manganese sulfate, Calcium phosphate

BASES

Product Name	Use	EH	Components
Ortho-Gro 12-6-[illegible]	Plant food	N	Fish, Urea, Phosphoric acid, Potassium hydroxide, Iron, Zinc & chelating agent
Red Thumb 10-55	Plant food	N	Bone meal, Urea, Phosphoric pentoxide or Phosphoric acid, Potassium oxide
Soft scrub	Cleaner	N	Calcium carbonate, Detergent
Whale Plant Food	Plant food	N	Mixed organoamines
ZEP Germicida Cleaner, Lysol Cleaner	Basin tub & tile cleaner	N	N-Alkyldimethylbenzylammonium chloride
Epoxy Part B, Tapox Part B	Epoxy	N	Organoamine resin
Simoniz White Wall Cleaner	Cleaner	N	Sodium silicate, Ethylacetate
Hydroprep Cleaner & Conditioner	Plant food	N	Sodium hydroxide, Iron & lime remover
Parson's Sudsy Ammonia	Cleaner	N	Ammonia, Surfactant
SSS-T Metal Cleaner	Metal cleaner	N	Methylene chloride, Xylol, Methanol, Ammonia
Dupont Chrome Polish	Chrome polish	N	Ammonium oxalate
Scotts Starter Fertilizer	Lawn fertilizer	N	Urea, Methylene monoammonium phosphate, Muriate of potash
Spic-n-Span	Bath & sink cleaner	N	Sodium sesquicarbonate, Sodium tripolyphosphate, TSP, Anionic surfactants
Brasso, Wrights Silver Polish, Jasco, Noxon	Polish	N	Ammonia, Petroleum distillates
Basic R	Rug cleaner	N	Sodium alkylsulfates, Glycol ether
Ortho, Skippy, 49er Citrus Food, Rhododendron Food, Miracle Grow, Ortho Gro	Plant food	N	Urea, Iron, Zinc, Magnesium, Organoamines

APPENDIX D

DOT/STATE/FEDERAL CROSS REFERENCING CHART

DOT Classification	DOT Definition	Clean Water Act (Hazardous Substances)	Hazardous Waste California	Hazardous Waste Federal
Explosives	Rapid release of heat or gas	Yes	Reactivity Toxicity	Reactivity Toxicity
Compressed Gases	Pressure hazard Flammability hazard Toxicity hazard	None	Ignitable Reactivity Toxicity	Ignitable Reactivity Toxicity
Flammable and Combustible Liquids	Flashpoint < 141°F Flashpoint > 141°F but < 200° F	Yes	Ignitable Toxicity	Ignitable Toxicity
Flammable Solids and Spontaneously Combustables	Friction or self-ignition	Yes	Ignitable Toxicity	Ignitable Toxicity
Oxidizers Organic Peroxides	Readily yields O_2 Both fuel and O_2 source	Yes	Ignitable Reactivity Toxicity	Ignatable Reactivity Toxicity
Poisonous Material Infectious Material	Toxicity Viable organisms	Yes	Reactivity Toxicity	Reactivity Toxicity
Radioactive Material	Ionizing radiation	None	None	None
Corrosives	¼ inch steel or aluminum/year Destructive to human skin	Yes	Corrosivity Solids Reactivity Toxicity	Corrosivity Reactivity Toxicity
Miscellaneous Hazardous Materials	Irritating Not meeting specific lists	Yes		

APPENDIX B-12

Landfill Gas Probe Monitoring Results

AIR TOXICS LTD.

SAMPLE NAME: Gas Well #5
ID#: 9809376B-05A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name: 3092926
Dil. Factor: 1.52

Date of Collection: 9/24/98
Date of Analysis: 9/29/98

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.15	0.21
Nitrogen	0.015	11
Methane	0.002	57
Carbon Dioxide	0.002	32

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Gas Well #34

ID#: 9809376B-06A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name:	**3092927**	**Date of Collection:**	**9/24/98**
Dil. Factor:	**1.32**	**Date of Analysis:**	**9/29/98**

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.13	Not Detected
Nitrogen	0.013	5.0
Methane	0.001	57
Carbon Dioxide	0.001	38

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Gas Well #55

ID#: 9809376B-07A

Atmospheric Gases by Modified ASTM D-3416
GC/TCD/FID

File Name: 3092928
Dil. Factor: 1.46

Date of Collection: 9/25/98
Date of Analysis: 9/29/98

Compound	Det. Limit (%)	Amount (%)
Oxygen	0.15	19
Nitrogen	0.015	81
Methane	0.001	0.12
Carbon Dioxide	0.001	0.14

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME : Gas Well#5

ID#: 9809376A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1100814	Date of Collection: 9/24/98
Dil. Factor:	76.0	Date of Analysis: 10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	38	140 J
Freon 114	38	110 J
Chloromethane	38	Not Detected
Vinyl Chloride	38	170
Bromomethane	38	Not Detected
Chloroethane	38	80 J
Freon 11	38	Not Detected
1,1-Dichloroethene	38	Not Detected
Freon 113	38	Not Detected
Methylene Chloride	38	Not Detected
1,1-Dichloroethane	38	Not Detected
cis-1,2-Dichloroethene	38	Not Detected
Chloroform	38	Not Detected
1,1,1-Trichloroethane	38	Not Detected
Carbon Tetrachloride	38	Not Detected
Benzene	38	200
1,2-Dichloroethane	38	Not Detected
Trichloroethene	38	Not Detected
1,2-Dichloropropane	38	Not Detected
cis-1,3-Dichloropropene	38	Not Detected
Toluene	38	41 J
trans-1,3-Dichloropropene	38	Not Detected
1,1,2-Trichloroethane	38	Not Detected
Tetrachloroethene	38	Not Detected
Ethylene Dibromide	38	Not Detected
Chlorobenzene	38	82 J
Ethyl Benzene	38	190
m,p-Xylene	38	140 J
o-Xylene	38	82 J
Styrene	38	Not Detected
1,1,2,2-Tetrachloroethane	38	Not Detected
1,3,5-Trimethylbenzene	38	Not Detected
1,2,4-Trimethylbenzene	38	74 J
1,3-Dichlorobenzene	38	Not Detected
1,4-Dichlorobenzene	38	81 J
Chlorotoluene	38	Not Detected
1,2-Dichlorobenzene	38	Not Detected
1,2,4-Trichlorobenzene	38	Not Detected
Hexachlorobutadiene	38	Not Detected
Propylene	150	Not Detected
1,3-Butadiene	150	Not Detected
Acetone	150	Not Detected
Carbon Disulfide	150	Not Detected
2-Propanol	150	Not Detected
trans-1,2-Dichloroethene	150	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Gas Well#5

ID#: 9809376A-05A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1100814	Date of Collection: 9/24/98
Dil. Factor:	76.0	Date of Analysis: 10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	150	Not Detected
2-Butanone (Methyl Ethyl Ketone)	150	Not Detected
Hexane	150	650
Tetrahydrofuran	150	Not Detected
Cyclohexane	150	210 J
1,4-Dioxane	150	Not Detected
Bromodichloromethane	150	Not Detected
4-Methyl-2-pentanone	150	Not Detected
2-Hexanone	150	Not Detected
Dibromochloromethane	150	Not Detected
Bromoform	150	Not Detected
4-Ethyltoluene	150	Not Detected
Ethanol	150	31000 E
Methyl tert-Butyl Ether	150	Not Detected
Heptane	150	800

E = Exceeds instrument calibration range.
J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	94	70-130

TRANSMISSION VERIFICATION REPORT
Page 11
TIME : 10/22/1998 13:47
NAME : SD CO CENTRAL
FAX : 707-792-0416
TEL : 707-792-0547

DATE,TIME	10/22 13:46
FAX NO./NAME	PWD
DURATION	00:01:06
PAGE(S)	02
RESULT	OK
MODE	STANDARD ECM

TRANSMISSION VERIFICATION REPORT

TIME : 10/22/1998 07:18
NAME : SO CO CENTRAL
FAX : 707-792-0416
TEL : 707-792-0547

AIR TOXICS LTD.

DATE,TIME	10/22 07:17
FAX NO./NAME	4884711
DURATION	00:00:43
PAGE(S)	02
RESULT	OK
MODE	STANDARD ECM

SAMPLE NAME : Gas Well
ID#: 9809376A-06A
EPA METHOD TO-14 GC/MS

File Name:	1100815	Date of Collection:	9/24/98
Dil. Factor:	66.0	Date of Analysis:	10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	33	420
Freon 114	33	Not Detected
Chloromethane	33	Not Detected
Vinyl Chloride	33	67 J
Bromomethane	33	Not Detected
Chloroethane	33	Not Detected
Freon 11	33	96 J
1,1-Dichloroethene	33	Not Detected
Freon 113	33	Not Detected
Methylene Chloride	33	120 J
1,1-Dichloroethane	33	Not Detected
cis-1,2-Dichloroethene	33	85 J
Chloroform	33	Not Detected
1,1,1-Trichloroethane	33	Not Detected
Carbon Tetrachloride	33	Not Detected
Benzene	33	750
1,2-Dichloroethane	33	Not Detected
Trichloroethene	33	Not Detected
1,2-Dichloropropane	33	Not Detected
cis-1,3-Dichloropropene	33	Not Detected
Toluene	33	7200
trans-1,3-Dichloropropene	33	Not Detected
1,1,2-Trichloroethane	33	Not Detected
Tetrachloroethene	33	48 J
Ethylene Dibromide	33	Not Detected
Chlorobenzene	33	72 J
Ethyl Benzene	33	3000
m,p-Xylene	33	7000
o-Xylene	33	2500
Styrene	33	Not Detected
1,1,2,2-Tetrachloroethane	33	Not Detected
1,3,5-Trimethylbenzene	33	760
1,2,4-Trimethylbenzene	33	2300
1,3-Dichlorobenzene	33	Not Detected
1,4-Dichlorobenzene	33	430
Chlorotoluene	33	Not Detected
1,2-Dichlorobenzene	33	38 J
1,2,4-Trichlorobenzene	33	Not Detected
Hexachlorobutadiene	33	Not Detected
Propylene	130	Not Detected
1,3-Butadiene	130	Not Detected
Acetone	130	1000
Carbon Disulfide	130	Not Detected
2-Propanol	130	200 J
trans-1,2-Dichloroethene	130	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Gas Well#34

ID#: 9809376A-06A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1100815	Date of Collection: 9/24/98
Dil. Factor:	66.0	Date of Analysis: 10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	130	Not Detected
2-Butanone (Methyl Ethyl Ketone)	130	4000
Hexane	130	420
Tetrahydrofuran	130	1400
Cyclohexane	130	160 J
1,4-Dioxane	130	Not Detected
Bromodichloromethane	130	Not Detected
4-Methyl-2-pentanone	130	1700
2-Hexanone	130	Not Detected
Dibromochloromethane	130	Not Detected
Bromoform	130	Not Detected
4-Ethyltoluene	130	2000
Ethanol	130	390
Methyl tert-Butyl Ether	130	Not Detected
Heptane	130	530

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME : Gas Well#55

ID#: 9809376A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1100816	Date of Collection: 9/25/98
Dil. Factor:	97.3	Date of Analysis: 10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Freon 12	49	Not Detected
Freon 114	49	Not Detected
Chloromethane	49	Not Detected
Vinyl Chloride	49	Not Detected
Bromomethane	49	Not Detected
Chloroethane	49	Not Detected
Freon 11	49	Not Detected
1,1-Dichloroethene	49	Not Detected
Freon 113	49	Not Detected
Methylene Chloride	49	Not Detected
1,1-Dichloroethane	49	Not Detected
cis-1,2-Dichloroethene	49	Not Detected
Chloroform	49	Not Detected
1,1,1-Trichloroethane	49	Not Detected
Carbon Tetrachloride	49	Not Detected
Benzene	49	Not Detected
1,2-Dichloroethane	49	Not Detected
Trichloroethene	49	Not Detected
1,2-Dichloropropane	49	Not Detected
cis-1,3-Dichloropropene	49	Not Detected
Toluene	49	100 J
trans-1,3-Dichloropropene	49	Not Detected
1,1,2-Trichloroethane	49	Not Detected
Tetrachloroethene	49	Not Detected
Ethylene Dibromide	49	Not Detected
Chlorobenzene	49	Not Detected
Ethyl Benzene	49	Not Detected
m,p-Xylene	49	100 J
o-Xylene	49	Not Detected
Styrene	49	Not Detected
1,1,2,2-Tetrachloroethane	49	Not Detected
1,3,5-Trimethylbenzene	49	Not Detected
1,2,4-Trimethylbenzene	49	Not Detected
1,3-Dichlorobenzene	49	Not Detected
1,4-Dichlorobenzene	49	Not Detected
Chlorotoluene	49	Not Detected
1,2-Dichlorobenzene	49	Not Detected
1,2,4-Trichlorobenzene	49	Not Detected
Hexachlorobutadiene	49	Not Detected
Propylene	190	Not Detected
1,3-Butadiene	190	Not Detected
Acetone	190	220 J
Carbon Disulfide	190	Not Detected
2-Propanol	190	1900
trans-1,2-Dichloroethene	190	Not Detected

AIR TOXICS LTD.

SAMPLE NAME : Gas Well#55

ID#: 9809376A-07A

EPA METHOD TO-14 GC/MS Full Scan

File Name:	1100816	Date of Collection:	9/25/98
Dil. Factor:	97.3	Date of Analysis:	10/ 8/98

Compound	Det. Limit (ppbv)	Amount (ppbv)
Vinyl Acetate	190	Not Detected
2-Butanone (Methyl Ethyl Ketone)	190	590
Hexane	190	Not Detected
Tetrahydrofuran	190	Not Detected
Cyclohexane	190	Not Detected
1,4-Dioxane	190	Not Detected
Bromodichloromethane	190	Not Detected
4 Methyl-2-pentanone	190	Not Detected
2-Hexanone	190	Not Detected
Dibromochloromethane	190	Not Detected
Bromoform	190	Not Detected
4-Ethyltoluene	190	Not Detected
Ethanol	190	60000 E
Methyl tert-Butyl Ether	190	Not Detected
Heptane	190	Not Detected

F = Exceeds instrument calibration range.
J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	% Recovery	Method Limits
Octafluorotoluene	108	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	92	70-130

APPENDIX B-13

Dust Control Plan

See Appendix L

APPENDIX B-14

Leachate Extraction Program

COUNTY OF SONOMA

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Work Plan

Active and Passive Removal of Leachate from the Landfill Interior - Central Disposal Site 500 Mecham Road, Petaluma, California

September 30, 1999

PREPARED FOR:

REGIONAL WATER QUALITY CONTROL BOARD - NORTH COAST REGION

PREPARED BY:

SONOMA COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403
Edward J. Walker, Director

AREA CODE (707)
ROADS 565-2231
TRANSIT 585-7516
REFUSE 565-2231
AIRPORT 524-7243
AIR POLLUTION 433-5911
FAX 565-2620

September 30, 1999

File: 50-01-17.3

Mr. John Short
Senior Water Resources Control Engineer
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Re: Work Plan for the Active and Passive Removal of Leachate from the Landfill Interior Central Disposal Site, 500 Mecham Road, Petaluma, California

Dear Mr. Short:

The attached work plan is submitted in response to the July 19, 1999 formal request of Lee A. Michlin, Executive Officer, to submit a work plan to address the high volumes of leachate apparently existing within the interior of the fill which presents a potential treat to groundwater and obstructs the collection of landfill gas.

The County has commenced development of the leachate extraction program but is prepared to make any adjustments to the program based on you review of this work plan and subsequent direction. If you have any questions, please contact the undersigned at (707) 792-4961.

Respectfully submitted,

EDWARD J. WALKER, DIRECTOR
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

Alex Sebastian
Civil Engineer

Attachment: Work Plan; Leachate Extraction Program, Central Disposal Site, September 30, 1999

c: Ed Walker Ken Wells Susan Klassen Don Poindexter Rob Sprinkle
Bob Swift, LEA

California Regional Water Quality Control Board
North Coast Region
Ross R. Liscum, Chairman

Winston H. Hickox
Secretary for Environmental Protection

Gray D
Govern

Internet Address: http://www.swrcb.ca.gov
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone (707) 576-2220 ∃ FAX (707) 523-0135

July 19, 1999

Ms. Susan Klassen
Sonoma County Department of Public Works
500 Mecham Road
Petaluma, CA 95403

Dear Ms. Klassen:

Subject: Sonoma County Central Landfill

This letter responds to the report prepared by Mr. Robert Sprinkle of your staff regarding landfill gas collection facilities at the Central landfill. The report is dated May 28, 1999, and was prepared in response to our letter of May 13, 1999, which requested information about gas management.

The information which was provided included data regarding the total depth and depth to leachate in vertical extraction wells. Our review of this data indicates that there is a large quantity of leachate in the fill that is a threat to water quality and interferes with production and removal of landfill gas. We are aware that there are plans to install leachate extraction wells later this summer but have concerns that the scope of the planned work may not be sufficient to de-water the saturated portions of the landfill.

At this time we would like to formally request the preparation of a workplan to determine available approaches to de-water the landfill. The workplan must contain an engineered design for the recommended alternative, a monitoring proposal and a time schedule for implementing remedial measures. This request is made pursuant to Section 13267 of the California Water Code. In order to proceed in a timely manner, please submit the workplan on or before October 1, 1999.

In the meantime, we would encourage you to proceed with existing plans to install leachate extraction facilities. The data from operating extraction wells will be of significant value in determining the scope of full scale facilities which would be necessary to de-water the landfill. We would lastly suggest that immediate attention be given to such de-watering facilities as may be needed beneath the compost pad. It is our understanding that Sonoma Compost Company is going to construct a concrete slab over that entire area beginning as early as next month. These two projects need to be coordinated.

Please give me a call if there are questions on this matter.

Sincerely,

Lee A. Michlin
Executive Officer

LAM:dse:bp/cendwwp

cc: Bob Swift, Sonoma County Health Department
Ken Wells, Sonoma County Public Works
Mike Delmanowski, EBA Wastechnologies
Paul Paddock, Sonoma Compost Company

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3.0 ATTACHMENTS

1. Central Leachate Monitoring Results
2. Measured Leachate Levels for Fifteen Gaqs Wells & Three Leacahte Monitoring Wells
3. Central Landfill Leachate Extraction Plan (24"x36" plan sheet)
4. Plan view and 3-dimensional rendering of Horizontal CollectorPhases IV through VIII
5. Boring Logs of Wells 64 through 77, LTN-R, 33R, LW-1, LW-2
6. Product information on 4" electric submesrible leachate pump
7. Information on pneumatic leachate pumping system

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
INTEGRATED WASTE DIVISION

WORK PLAN

LEACHATE EXTRACTION PROGRAM
CENTRAL DISPOSAL SITE
SEPTEMBER 1999

1.0 BACKGROUND

During the winter of 1997/98 the County conducted leachate pumping tests on gas extraction wells GW-10 and GW-12 to investigate how gas collection rates might be improved by pumping leachate levels down to expose more of the perforated well casing. The results were favorable with gas production increasing as long as leachate levels were maintained below the perforations. The County concluded that additional gas wells should be considered to, (1) provide a means of actively pumping leachate out of the fill, and (2) improve gas collection efficiency. All new wells would be designed to collect gas as well as being capable of receiving a leachate pump which could operate simultaneously with gas collection. Consideration would be given to retrofitting certain existing wells with leachate pumps.

Static leachate levels were measured in a representative number of gas wells over a year and a half from December 2, 1997 to May 6, 1999. Attachment 1, Central Leachate Monitoring Results, shows leachate level data for 19 gas wells. The results support the opinion that elevated leachate surface levels should be lowered through a program involving both passive drainage and active pumping .

The Integrated Waste Division will request funding during their annual budget requests to contract for installation of approximately 15 additional gas extraction wells with capability for leachate extraction over the next several years. The proposed wells will ensure that a sufficient number of collection points for leachate de-watering and gas collection, and will ensure that as old wells are replaced as they become compromised under the rigors of landfill life.

2.0 LEACHATE EXTRACTION PROGRAM

2.1 Overview

Based on information obtained during the sounding of gas collection and leachate monitoring wells, leachate levels within the fill are higher than desirable. Elevated leachate levels and perched zones are likely caused by inadequate drainage in the vertical component due to excessive use of cover soils in the past.

During August/September 1999, 18 new vertical extraction wells were installed (these wells are discussed in greater detail below in the Section 2.3.2, Installation of 18 Vertical Extraction Wells. Leachate levels measured between August 25 and September 14, 1999 (measured shortly following completion of each well) are shown in Attachment 2. Measurements were taken prior to vacuum being placed on the wells. In contrast, measurements taken September 30, 1999 were taken with the vacuum source connected to the well and are also included in Attachment 2. During drilling of the new wells, it became apparent that perched leachate zones were common in the fill. This is preferable to the scenario of a landfill interior fully saturated with leachate. Drilling of new wells helps in punching through the perched zones allowing them to drain down through the fill to the collection sump and/or be discharged via pumps to be placed in the new wells.

This work plan will address methods of removing leachate currently contained within the refuse mass and methods currently being employed to prevent leachate from becoming perched during future placement of refuse in the fill.

2.2 Passive Leachate Collection and Gravity Conveyance System

Commencing 1998, a new program was implemented to sub-excavate into the old refuse/cover soils prior to the placement of new refuse to improve leachate drainage. This enables leachate generated from newly placed refuse to migrate more freely in the downward direction. Intermediate cover soil and in some cases even daily cover was removed until new refuse could be placed directly over older refuse materials.

Leachate sub-drains were installed at the lowest elevation of the areas sub-excavated. These leachate drains in addition to other passive collectors are discussed below and are shown on Attachment 3, Central Landfill Leachate Extraction Plan.

2.2.1 Westerly Canyon Leachate Drain - Horizontal Gas Collector Combination

In the westerly canyon (previous location of the yardwaste, wood chipping, and Fleet Operations

building) a high volume french drain collector system was constructed down the centerline of canyon. Extending vertically above the central french drain are 5 "chimneys" which serve to provide future vertical continuity with collection features to be installed above the original french drain. The chimneys, consisting of 48-inch corrugated metal pipes filled with 1-1/2 inch drain rock extend the influence of the french drain both in terms of leachate drainage and gas collection.

As refuse continues to fill above the level of the french drain, horizontal gas collection trenches will be constructed at 90 degrees to the alignment of the central french drain. The gas collectors will have continuity with the central french drain via the vertical chimneys. All trenches will be sloped at a minimum 3 percent to ensure drainage of leachate in all portions of the collector system. Except while chimneys are being extended (raised) to accept additional fill, the chimneys are sealed off to the atmosphere with PVC fabric boots to prevent infiltration of oxygen and exhausting of landfill gas.

Leachate collected in the passive drainage system penetrates the compacted earthen barrier at the southern terminus of the westerly canyon via an 8-inch high density polyethylene (HDPE) pipe. Leachate is currently conveyed to Leachate Pond No. 1 (LP-1). Currently, a branch point is being installed so that leachate from the westerly canyon french drain system can be diverted to either LP-1 or LP-2. The management issue as to which leachate pond should receive the discharge is addressed in a separate report Leachate Management Plan Update, dated August 13, 1999, also prepared by the Integrated Waste Division.

2.2.2 Northerly Canyon Leachate Drain - Horizontal Gas Collector Combination

The "Northerly Canyon" refers to the canyon immediately north of the area actively being filled prior to 1998, south of the current compost operation, and at the bottom of which existed the paved public access road. Prior to the placement of fill in this canyon beginning in the fall of 1998, a leachate collection and drainage system similar to the one just described was constructed. One branch of the drain was constructed immediately adjacent to and west of a low permeability earthen barrier. The other branch was constructed along the center line of the canyon on an east-west alignment (original paved roadway alignment).

Similar to the Westerly Canyon Leachate Drain, chimneys have been constructed on 200 ft centers along the collector. To date two staggered tiers of gas collectors/leachate drains have been constructed at right angles to the main drain lines and connected via the vertical chimneys. This system discharges to the 8-inch HDPE Easterly Conveyance Line with the capability to discharge to either LP-1 or LP-2.

2.2.3 Horizontal Gas Collectors - Phases V Through VIII

Horizontal Gas Collector Phases V through VIII were installed in the north-south direction at elevations ranging from elevation 318 to 388 (assumed local datum). These horizontal collectors are shown in plan view and in a 3-dimensional rendering in Attachment 4. Due to their current burial depths ranging from 90 to 160 feet below the landfill surface, certain of the collectors freely drain leachate from what is assumed to be perched pockets of leachate which coincide with the perforated sections.

These collectors which daylight at both the southern and northern end (with gas control valves at both ends) vary from some which produce only gas to others which are waterlogged with leachate at their southern end. In the past, it was typical to shut off the southern isolation valve if excessive leachate was discharged at the southern end. These collectors are now considered a potential contributor to the passive de-watering of the fill.

Future plans include installing leachate conveyance lines to each collector separate from the gas/condensate collection lines at each collector's southern terminus. This will improve the ability to free flow leachate without impairing gas collection or over burdening the condensate management system with excessive leachate.

2.2.4 Quality Control During Refuse Placement

For the past year, a full time civil engineer has been providing direct oversight during the placement and covering of the refuse to ensure efficient use of landfill space to prevent the construction of impediments to leachate movement downward through the fill. This investment will pay off in improved leachate management.

2.3 <u>Active (Pumped) Leachate Extraction System</u>

2.3.1 Trial Pumping Program at Existing Gas Well GW-24

Commencing July 1999, an electric submersible pump was installed in gas well GW-24. Pump information is included in Attachment 6. This well was selected for a trial pumping program based on factors including, well depth, location within the fill, and proximity to power and leachate discharge conveyance lines. The pump selected is a Goulds Pumps Model 55GS, seven stage, 4" high capacity submersible pump. The pump as set down hole at approximately 75 feet below ground surface (bgs), discharges approximately 150 gallons per hour. Due to delays in extending the overhead electrical service to GW-24, the pump is currently powered with an electrical generator. To the extent that the generators limited fuel tank can be kept full, the pump runs continuously and discharges to a 4-inch HDPE conveyance line which connects to the 8-

inch conveyance line running along the east limit of the active landfill. The discharge from GW-24 is ultimately discharged to either Leachate Pond No. 1 or No. 2. At the current time the pump in GW-24 is not operating due to either a mechanical problem with the pump or an electrical problem with the controller. A technician is due to arrive shortly to resolve the problem. So far there has been a minimal drop in the leachate levels in neighboring wells GW-21, GW-22, and GW-23.

2.3.2 Installation of 18 Vertical Extraction Wells

During August/September 1999, 15 new vertical gas wells, 2 new leachate monitoring wells, and one replacement leachate monitoring well, were installed. The well locations are shown on Attachment 3, Central Landfill Leachate Extraction Plan. These wells were designed and installed such that they could simultaneously function as both vertical gas wells and leachate extraction wells. Casing diameters for the 15 new gas extraction wells were increased from the usual 4-inch to 6-inch to accommodate pump installation. Locations for the gas wells were based primarily on gas collection criteria. Well depths however were increased to terminate just above the clay liner to enable maximum leachate pumping. In many cases these wells were terminated well below the leachate surface. Drilling logs are included in Attachment 5. Well soundings including readings taken September 30, 1999 are included in Attachment 2.

The 2 new leachate monitoring wells were installed with 8-inch casings to enable higher flow rate pumps to be installed. Leachate monitoring well Nos. LW-1 and LW-2 were located over the flow-line of the original canyon. Such an installation will optimize the ability to pump leachate from the deepest portions of the fill. The third leachate well, LTN-R was installed as a replacement of the original leachate well LTN which was damaged..

On September 16, 1999 an electric submersible pump identical to the one installed in GW-24 was placed in the newly installed leachate monitoring well LW-1 at a depth of approximately 100 feet. This well has been producing approximately 400 gph.

The County is currently procuring a pneumatic pumping system consisting of 11 pneumatic pumps, industrial grade air compressor, air line and discharge pipes to be installed in selected gas wells installed during August/September 1999. The pneumatic pumping system under consideration is described in Attachment 7. The wells proposed to receive pumps include GW-10, GW-12, GW-22, GW-24, GW-39-R, GW-64, GW-68, GW-70, GW-76, LW-1, and LW-2, and are shown on the drawing in Attachment 3.

A pneumatic system was selected over an electric system for the following reasons. Electric pumps operate at a higher discharge rate but cycle on and off more frequently. A pneumatic may produce a low flow rate but may operate continuously producing the same or greater daily

quantity. Safety and cost considerations for pump selection in the explosive environment suggested pneumatic pumps to be preferable. Extending electrical service to the numerous well locations would be costly and based on experience could significantly delay the project. Overhead electrical service would involve putting a contract out to bid and would likely delay the project until spring summer of 2000. Installing underground electrical service would be even more expensive than overhead and presents the added danger of buried utilities that could be encountered during the subsurface work constantly occurring at the Central Disposal Site.

A pneumatic pump system would require compressed air lines which could be buried or placed on the ground surface and can be readily constructed or extended with on-site and equipment and labor. Should a pump be required to be moved to another well its compressed air line and discharge conveyance line can be quickly modified to provide service in its new location.

Pump discharge (leachate) will be conveyed to leachate ponds LP-1 or LP-2 via a dendritic network of HDPE conveyance lines. Consideration is being given to routing the header line near the Methane Power Plant to provide the future option of thermal destruction using either waste heat from the power plant or direct injection into the gas flare.

2.4 Implementation Schedule

Much of the system described above is already in place and functioning.

At the time of preparation of this work plan, procurement is underway for 11 pneumatic pumps, industrial compressor, SDR 9 HDPE compressed air line, and SDR 17 HDPE discharge conveyance line. System installation will likely occur during December 1999.

Once the system in operational, bi-weekly to monthly leachate level soundings will be taken and recorded. This information will be available for inspection and at the request of the Regional Waste Quality Control Board can be included in monthly progress reports.

We propose a one-year evaluation period. We will propose expansions and/or modifications to the system and monitoring program based on a review of the data and rate of progress towards lowering leachate levels in the fill.

Annually, budget requests will be submitted for consideration of the installation of approximately 15 new vertical extraction wells each year for several years. These wells would be dual function wells for collection of both leachate and landfill gas.

ATTACHMENT "1"

Attachment 1

CENTRAL LEACHATE MONITORING RESULTS								
GAS WELL NO.	TOTAL DEPTH	GROUND ELEV.	TOC ELV.	Water Level (Depth[1] / Elevation[2])				
				12/02/97	12/12/97	01/29/98	02/17/99	05/06/99
49	131			NA	NA	NA	24	24
		422		NA	NA	NA	398	398
54	90			NA	NA	NA	53	61
		329		NA	NA	NA	276	268
30	106			NA	NA	NA	48	37
		469		NA	NA	NA	421	432
35	113			NA	NA	NA	33	35.9
		456		NA	NA	NA	423	420.1
38	123			NA	NA	NA	30	36.6
		458		NA	NA	NA	428	421.4
26	72			NA	NA	NA	DRY	60
		436		NA	NA	NA	DRY	376
39	61			NA	NA	NA	16.5	19.5
		419		NA	NA	NA	402.5	399.5
12	45			29.68	28.28	NA	NA	20
		525	527.52	497.84	499.24	NA	NA	507.52
24	80			NA	NA	NA	NA	27
		493		NA	NA	NA	NA	466
10	72			29.24	29.14	26.02	NA	NA
			530.35	501.11	501.21	504.33	NA	NA
11	34			33.9	33.18	33.01	NA	NA
			533.11	499.21	499.93	500.1	NA	NA
13	59			NA	NA	25.98	NA	NA
			524.85	NA	NA	498.87	NA	NA
15	58			NA	NA	28.7	NA	NA
			517.98	NA	NA	489.28	NA	NA
16	52			NA	NA	19.6	NA	NA
			511.33	NA	NA	491.73	NA	NA
18	76			NA	NA	22.08	NA	NA
			500.43	NA	NA	478.35	NA	NA
17	70			NA	NA	23.2	NA	NA
			514.26	NA	NA	491.06	NA	NA
14	40			NA	35.4	28.5	NA	NA
			513.51	NA	478.11	485.01	NA	NA
7	80			NA	38.02	NA	NA	NA
				NA	NA	NA	NA	NA
8	77			NA	NA	19.5	NA	NA
			521.76	NA	NA	502.26	NA	NA

NOTE 1 Depth measurements taken from top of casing where TOC elevation known, otherwise depth is adjusted from ground elevation.

NOTE 2 Alll elevations are approximate based on topo maps and survey of TOC data.

ATTACHMENT “2”

Attachment 2

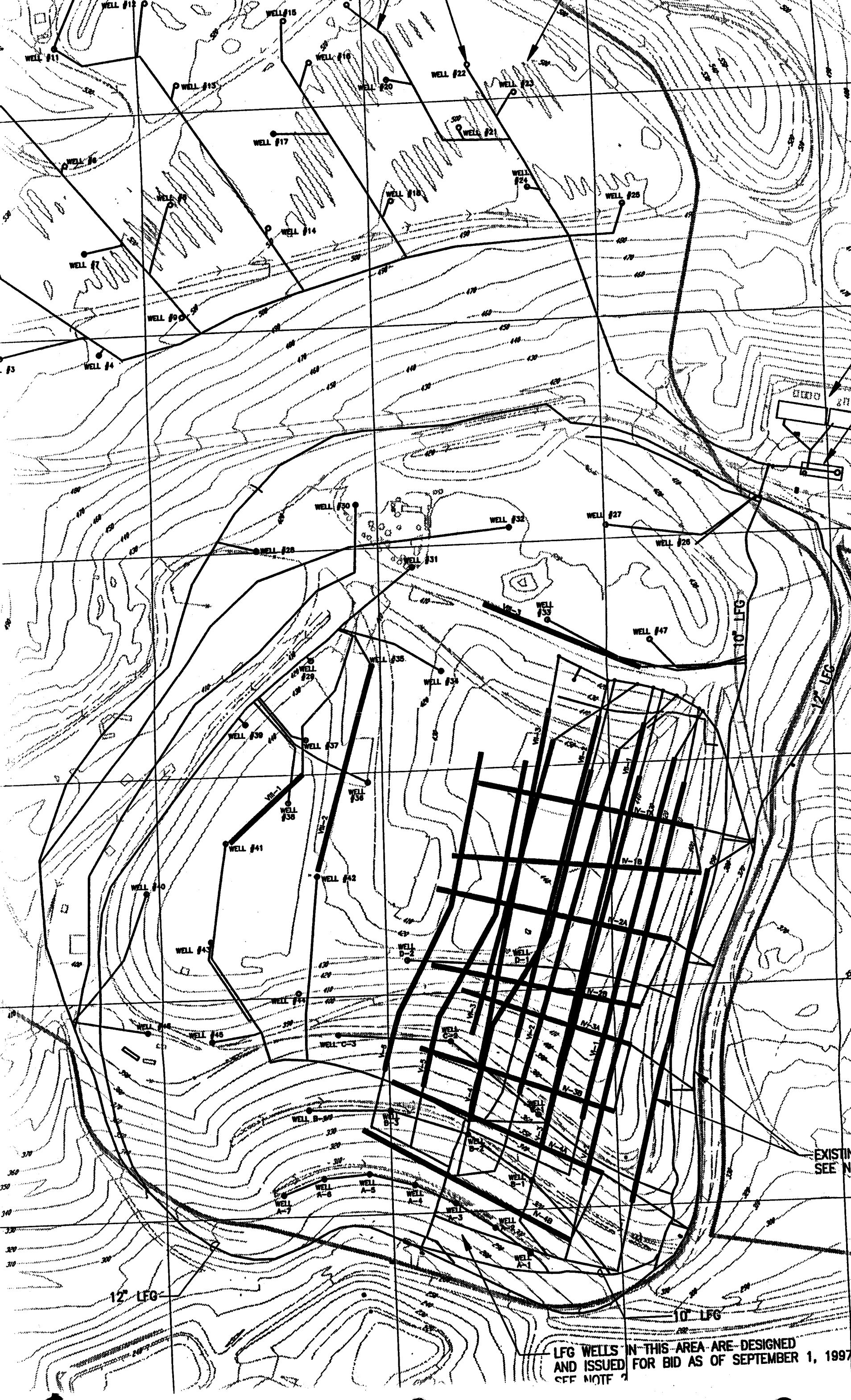
Measured Leachate Levels For 15 Gas Wells 3 Leachate Monitoring Wells

	Well Name	Well Casing	Well Depth	Liquid Level[1]	Date	Liquid Level[2]	Date
C-4	#64	6" HDPE	75'	47'	8/25/1999	44'	9/30/1999
C-5	#65	6" HDPE	55'	42'	8/25/1999	40'	9/30/1999
C-9	#66	6" HDPE	75'	Dry	9/10/1999	73'	9/30/1999
C-6	#67	6" HDPE	75'	Dry	8/25/1999	66'	9/30/1999
C-7	#68	6" HDPE	77'	Dry	8/25/1999	42'	9/30/1999
C-8	#69	6" HDPE	48'	Dry	8/25/1999	38'	9/30/1999
D-3	#70	6" HDPE	145'	53'	8/25/1999	51'	9/30/1999
D-4	#71	6" HDPE	130'	62'	8/25/1999	50'	9/30/1999
D-5	#72	6" HDPE	130'	116'	8/25/1999	109'	9/30/1999
D-6	#73	6" HDPE	125'	Dry	8/25/1999	81'	9/30/1999
D-7	#74	6" HDPE	75'	Dry	8/25/1999	69'	9/30/1999
D-8	#75	6" HDPE	45'	Dry	8/25/1999	44'	9/30/1999
E-1	#76	6" HDPE	188'	102'	8/30/1999	87'	9/30/1999
E-2	#77	6" HDPE	180'	104'	8/30/1999	98'	9/30/1999
LTN-R	#78	6" HDPE	160'	Dry	9/10/1999	Dry	9/30/1999
33-R	#79	6" HDPE	160'	Dry	9/10/1999	Dry	9/30/1999
LW1	LW1	8" HDPE	140'	29'	8/26/1999	33'[1]	9/30/1999
LW2	LW2	8" HDPE	106'	63'	9/14/1999	63'[1]	9/30/1999

1. All levels reported are under a static conditions (no vacuum applied)
2. Levels reported under a negative pressure (vacuum applied)

ATTACHMENT "3"

ATTACHMENT “4”


WELL #11
WELL #12
WELL #13
WELL #14
WELL #15
WELL #16
WELL #17
WELL #18
WELL #20
WELL #21
WELL #22
WELL #23
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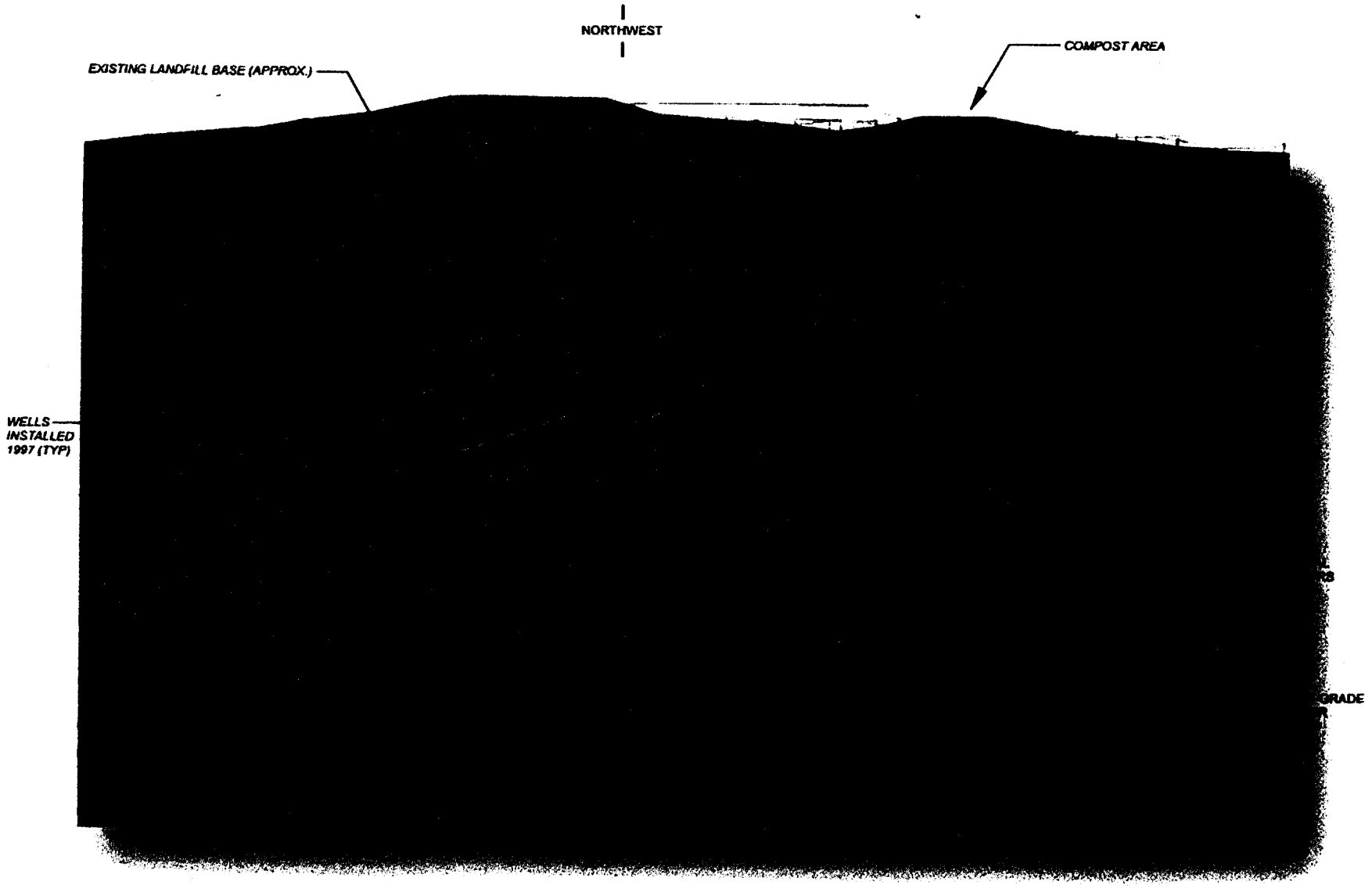
WELL #41
WELL #42
WELL #43
WELL #44
WELL #45
WELL #46
WELL #47
WELL #4
WELL #7
WELL #8
WELL #9
WELL C-3
WELL D-2
WELL D-1
WELL B-3
WELL B-2
WELL B-1
WELL A-1
WELL A-3
WELL A-4
WELL A-5
WELL A-6
WELL A-7
VII-1
VII-2
VII-3
VII-4
VII-5
VII-6
VII-7
IV-1A
IV-1B
IV-2A
IV-2B
IV-3A
IV-3B
IV-4A
IV-4B
10" LFG
12" LFG
12" LFG
10" LFG
EXISTIN
SEE N
LFG WELLS IN THIS AREA ARE DESIGNED
AND ISSUED FOR BID AS OF SEPTEMBER 1, 1997
SEE NOTE 2



5	landfill systems ENGINEERING	EXISTING LFG COLLECTORS - NORTHWEST VIEW 1971 PERMIT AREA LFG MASTER PLAN	FIG 5

ATTACHMENT "5"

LOG OF BORING

BORING NUMBER : 64

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/10/99

COMPLETION DATE: 8/10/99

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL; 6" HDPE SDR11
							PAPER, PLASTICS, WOOD, METAL, DRY W/SOME DECOMPOSITION	
25							PAPER, PLASTICS, WOOD, METAL, WIRE, DRY W/SOME DECOMPOSITION	
							PAPER, PLASTICS, WOOD, METAL, TIRE, MOIST W/SOME DECOMPOSITION	
							SAME	
50	FIRST WATER ENCOUNTERED AT 54' BGS						SAME, WET, WITH SOME DECOMPOSISTION	
							WOOD, METAL, PAPER, WET DIRT WOOD, METAL, PAPER, WET	
75							TOTAL DEPTH=75' BGS	
100								
125								

BORING NUMBER : 65

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/9/99

COMPLETION DATE: 8/9/99

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL
							PAPER, PLASTICS, WOOD, DRY W/SOME DECOMPOSITION	6" HDPE SDR11
25							WOOD, PLASTICS, DRY W/SOME DECOMPOSITION	
							TIRES, PAPER, PLASTICS, DRY W/SOME DECOMPOSITION	
50							TIRES, WIRE, PAPER, PLASTICS, MOIST W/MODERATE DECOMPOSITION	
							PAPER, PLASTICS, MOIST	
							TOTAL DEPTH=61' BGS	
75								
100								
125								

BORING NUMBER : 66

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MOD

CRV-Bucket/Auger Track

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 9/1/99

COMPLETION DATE: 9/1/99

TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL; 6" HDPE SDR11
							WOOD, PAPER, PLASTICS, DRY	
25							SAME	
							SAME	
50							SAME	
75							TOTAL DEPTH=75' BGS	
00								
25								

LOG OF BORING

BORING NUMBER : 67

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/6/99

COMPLETION DATE: 8/6/99

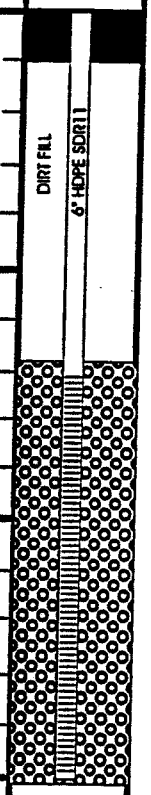
TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT/ROCK
							PAPER, PLYWOOD, DRY - DATED 1990
25							PLASTICS, WOOD, METAL, DRY
							PLASTICS, TIRES, METAL, DRY
50							PLASTICS, TIRES, METAL, MOIST
							PLASTICS, TIRES, METAL, MOIST, DATED 1990
							PLASTICS, TIRES, METAL, MOIST, SOME DECOMPOSITION
75							PLASTICS, TIRES, METAL, MOIST, DATED 1990
							TOTAL DEPTH=75' BGS
100							
125							

GAS WELL INSTALLATION



BORING NUMBER : 68

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/9/99

COMPLETION DATE: 8/9/99

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT/ROCK	
							PAPER, CARPET, - DATED SEPTEMBER 1990	DIRT FILL
25							WOOD, PAPER, TIRES, DRY, SEPTEMBER 1990	6" HDPE SDR11
							CARPET, WIRE, PAPER, MOIST W/SOME DECOMPOSITION	
50							DIRT, CARPET, PAPER, MOIST, SOME DECOMPOSITION, DATED SEPTEMBER '90	
	▽						WIRE, WOOD, PLASTIC, DIRT, WET, DATED SEPTEMBER 1990	
75							WIRE, WOOD, PLASTIC, PAPER, WET, DATED SEPTEMBER 1990	
							TOTAL DEPTH=77' BGS	
100								
125								

BORING NUMBER : 69

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/9/99

COMPLETION DATE: 8/9/99

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT, FEB 1990	
							PAPER, PLASTICS, WOOD	
							TIRES, WOOD, WIRE, PAPER, DRY W/SOME DECOMPOSITION, DATED FEB 1990	DIRT FILL; 6" HDPE SDR11
25							PAPER, PLASTICS, WOOD, MOIST W/SOME DECOMPOSITION, DATED FEB 1990	
							CARPET, WOOD, PAPER, MOIST W/SOME DECOMPOSITION, DATED FEB 1990	
	▽						WOOD, PAPER, PLASTIC, WET, MODERATE DECOMPOSITION, DATED FEB 1990	
50							TOTAL DEPTH=48' BGS, BOTTOM OF LF ENCOUNTERED	
75								
100								
125								

BORING NUMBER : 70

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MODE

CRV-Bucket/Auger Track

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/19/99

COMPLETION DATE: 8/19/99

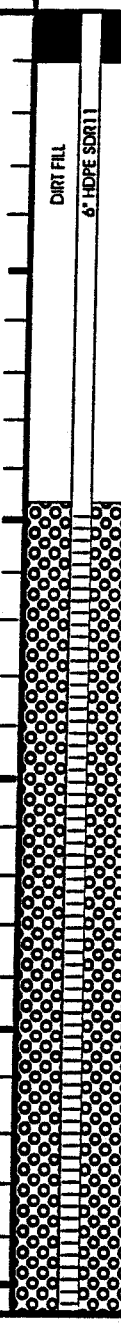
TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							WOOD, PAPER, PLASTICS, DRY W/SOME DECOMPOSITION
25							SAME
							SAME, MOIST
50							
	▽						SAME, WET
75							PAPER, TRASH, WET, BLACK
							DIRT, TRASH, WET, BLACK
100							PAPER, WIRE, WOOD, WET, BLACK
							SAME
125							

GAS WELL INSTALLATION



LOG OF BORING

BORING NUMBER : 70

SHEET _2_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/19/99

COMPLETION DATE: 8/19/99

DRILL MANUFACTURER/MODE

CRV-Bucket/Auger Track

TYPE OF BIT: Bucket/Aug

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							SAME	
							TOTAL DEPTH=145' BGS - BOTTOM OF LF	
150								
175								
200								
225								
250								

BORING NUMBER : 71

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/17/99

COMPLETION DATE: 8/17/99

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

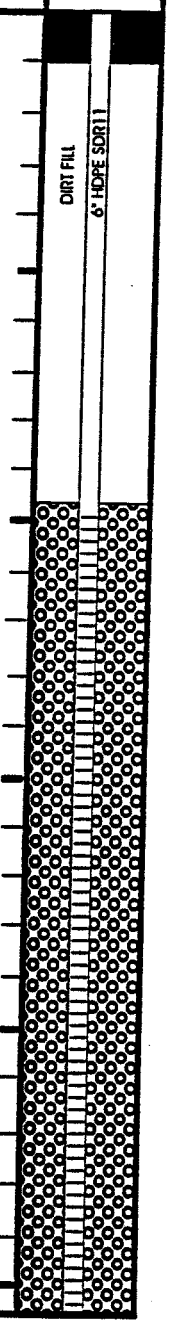
TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							WOOD, PAPER, PLASTICS, DRY
							WOOD, PAPER, PLASTICS, DRY, SOME DECOMPOSITION
25							
							SAME
50							MEDICAL WASTE, MOIST, SOME DECOMPOSITION
							PAPER, WIRE, WOOD, DIRT, MOIST, MODERATE DECOMPOSITION
	FIRST WATER						PAPER, WIRE, WOOD, DIRT, WET
75							PAPER, MUD, WOOD, WET
							SAME
							SAME
100							
							SAME
							SAME
125							

GAS WELL INSTALLATION



LOG OF BORING

BORING NUMBER : 71

SHEET _2_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/17/99

COMPLETION DATE: 8/17/99

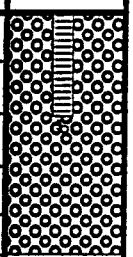
DRILL MANUFACTURER/MODEL:

CRV-Bucket/Auger Track

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							SAME	
150							TOTAL DEPTH=148' BGS	
175								
200								
225								
250								

BORING NUMBER : 72

LOG OF BORING

SHEET _1_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILL MANUFACTURER/MODEL:
CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/16/99

COMPLETION DATE: 8/16/99

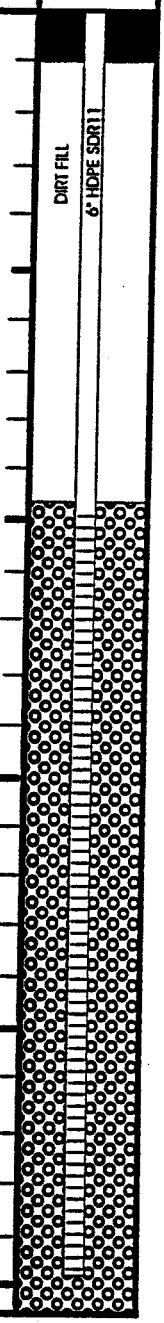
TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							PAPER, WIRE, DRY, SOME DECOMPOSITION
							WIRE, DIRT, DRY, SOME DECOMPOSITION
25							SAME, MOIST
50							SAME, MOIST
75							DIRT LENS, DRY
							PAPER, WOOD, PLASTICS, DRY
100	FIRST WATER						PAPER, WOOD, PLASTICS, WET, MODERATE DECOMPOSITION
							PAPER, WOOD, PLASTICS, WET, SOME DECOMPOSITION
							PAPER, WOOD, PLASTICS, WET, MODERATE DECOMPOSITION
							PAPER, WOOD, MUD, WET, MODERATE DECOMPOSITION
125							

GAS WELL INSTALLATION



BORING NUMBER : 72

LOG OF BORING

SHEET _2_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/16/99

COMPLETION DATE: 8/16/99

DRILL MANUFACTURER/MODEL:

CRV-Bucket/Auger Track

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							SAME	
							TOTAL DEPTH=130' BGS	
150								
175								
200								
225								
250								

LOG OF BORING

BORING NUMBER : 73

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/14/99

COMPLETION DATE: 8/14/99

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

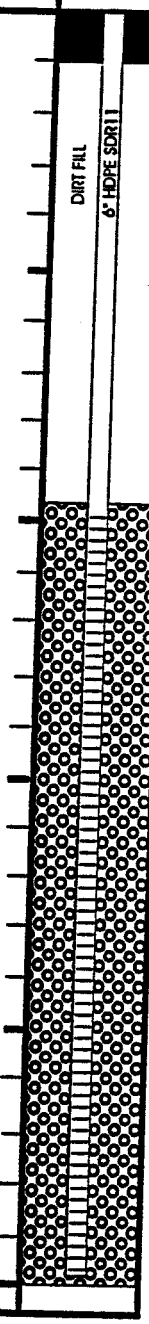
TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							PAPER, WOOD, PLASTICS, DRY
25							
							SAME
							PAPER, WOOD, PLASTICS, DIRT, MOIST, SOME DECOMPOSITION
50							
	FIRST WATER 60' BGS						
							PAPER, WOOD, PLASTICS, DIRT, WET, FIRST WATER, SOME DECOMPOSITION
75							PAPER, WOOD, PLASTICS, DIRT, WET, SOME DECOMPOSITION
100							SAME, MODERATE DECOMPOSITION
							SAME, MODERATE DECOMPOSITION
125							MUD, WET
							TOTAL DEPTH=125' BGS

GAS WELL INSTALLATION



BORING NUMBER : 74

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MO

PROJECT NUMBER:

CRV-Bucket/Auger Trac

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/12/99

COMPLETION DATE: 8/12/99

TYPE OF BIT: Bucket/

BORE HOLE DIAMETER:

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL
							DIRT	DIRT FILL
							PAPER, PLASTICS, WOOD, WIRE, DRY	6" HDPE SDR11
25							PAPER, PLASTICS, WOOD, WIRE, DRY	
							PAPER, PLASTICS, WOOD, WIRE, DRY, WITH SOME DECOMPOSITION	
							SAME	
50								
							SAME	
75							PAPER, PLASTICS, WOOD, TIRES, MOIST	
							TOTAL DEPTH=80' BGS	
100								
125								

BORING NUMBER : 75

LOG OF BORING

SHEET 1 OF 1

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

DRILL MANUFACTURER/MOD

PROJECT NUMBER:

CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/23/99

COMPLETION DATE: 8/23/99

TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT PAPER, PLASTICS, WOOD, METAL, DRY	DIRT FILL 6" HDPE SDR11
25							PAPER, PLASTICS, WOOD, METAL, DRY	
							PAPER, PLASTICS, WOOD, METAL, DRY PAPER, PLASTICS, WOOD, WIRE, DRY	
50							TOTAL DEPTH=47' BGS	
75								
00								
25								

BORING NUMBER : 76

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MO

PROJECT NUMBER:

CRV-Bucket/Auger Trac

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/27/99

COMPLETION DATE: 8/27/99

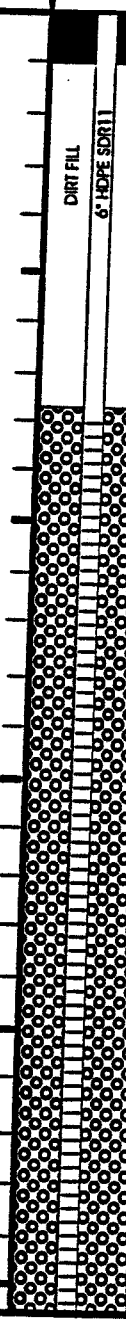
TYPE OF BIT: Bucket/A

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							PAPER, PLASTICS, WOOD, METAL, DRY
25							
							SAME
50							
							SAME
75							
							SAME
100							SAME, MOIST, SOME DECOMPOSITION
							SAME, MOIST, MODERATE DECOMPOSITION
							WOOD, TIRES, PAPER, MOIST, MODERATE DECOMPOSITION
							SAME
125							

GAS WELL INSTALLATION



LOG OF BORING

BORING NUMBER : 76

SHEET _2_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/27/99

COMPLETION DATE: 8/27/99

DRILL MANUFACTURER/MOD

CRV-Bucket/Auger Track

TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							MUD, DIRT, PAPER	
	FIRST WATER						MUD, DIRT, PAPER	
150								
							MUD, DIRT, PAPER	
175							WOOD, PAPER	
							TOTAL DEPTH=188' BGS	
200								
225								
250								

BORING NUMBER : 77

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MO

PROJECT NUMBER:

CRV-Bucket/Auger Trac

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/25/99

COMPLETION DATE: 8/25/99

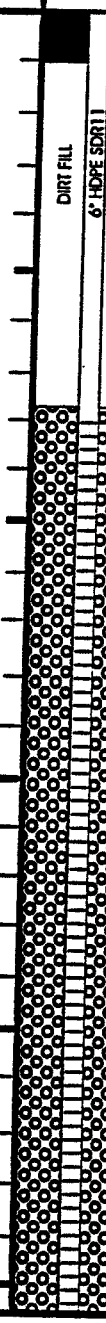
TYPE OF BIT: Bucket/A

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							DIRT, PAPER, PLASTICS, DRY
25							
							SAME, SOME DECOMPOSITION
50							
							SAME, SOME DECOMPOSITION
75							
							SAME, MOIST, MODERATE DECOMPOSITION
100							PAPER, DIRT, WOOD, MOIST, MODERATE DECOMPOSITION
							PAPER, DIRT, WOOD, MOIST, MODERATE DECOMPOSITION
125							BLACK TRASH, VERY MOIST

GAS WELL



LOG OF BORING

BORING NUMBER : 77

SHEET 2 OF 2

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/25/99

COMPLETION DATE: 8/25/99

DRILL MANUFACTURER/MO

CRV-Bucket/Auger Trac

TYPE OF BIT: Bucket/A

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL
	FIRST WATER						BLACK TRASH	
							BLACK TRASH, WET	
150							BLACK TRASH, WOOD, PAPER, WET	
							BLACK TRASH, WOOD, PAPER, WET	
175							BLACK TRASH, WOOD, PAPER, WET	
							TOTAL DEPTH=180' BGS	
200								
225								
250								

BORING NUMBER : LTN-R

LOG OF BORING

SHEET _1_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

DRILL MANUFACTURER/MO

PROJECT NUMBER:

CRV-Bucket/Auger Trac

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/23/99

COMPLETION DATE: 8/23/99

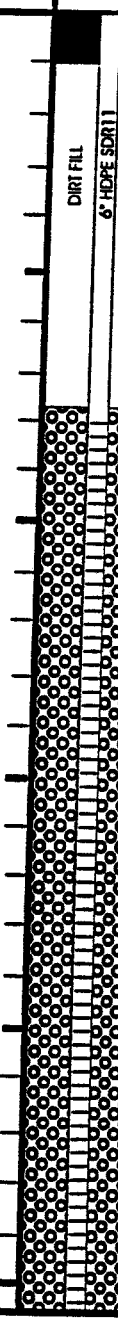
TYPE OF BIT: Bucket/

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL
							DIRT
							PAPER PLASTICS WOOD, DRY
							SAME, SOME DECOMPOSITION
25							SAME, SOME DECOMPOSITION
50							
							SAME, SOME DECOMPOSITION
75							SAME, SOME DECOMPOSITION
							PAPER, WOOD, DIRT LENS, MOIST, SOME DECOMPOSITION
							PAPER, WOOD, DRY, SOME DECOMPOSITION
100							
125							SAME, MOIST

GAS WELL



LOG OF BORING

BORING NUMBER : LTN-R

SHEET 2 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/23/99

COMPLETION DATE: 8/23/99

DRILL MANUFACTURER/MO

CRV-Bucket/Auger Trac

TYPE OF BIT: Bucket/A

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL
							SAME, MOIST, MODERATE DECOMPOSITION	
							SAME, MOIST, MODERATE DECOMPOSITION	
150							WOOD, DIRT, PAPER, VERY MOIST	
							TOTAL DEPTH=160' BGS	
175								
200								
225								
250								

BORING NUMBER : 33R

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MOD

PROJECT NUMBER:

CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/23/99

COMPLETION DATE: 8/23/99

TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL
							PAPER PLASTICS WOOD, METAL, DRY	6" HDPE SDR11
25								
							PAPER PLASTICS WOOD, METAL, DRY	
50								
							PAPER PLASTICS WOOD, METAL, DRY	
							SAME, SOME DECOMPOSITION	
75							SAME, SOME DECOMPOSITION	
100								
							SAME, SOME DECOMPOSITION	
125							BLACK TRASH, MOIST, MODERATE DECOMPOSITION	

LOG OF BORING

BORING NUMBER : 33R

SHEET _2_ OF _2_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILL MANUFACTURER/MOD

CRV-Bucket/Auger Track

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/23/99

COMPLETION DATE: 8/23/99

TYPE OF BIT: Bucket/A

BORE HOLE DIAMETER: 3

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT, TRASH, MIX, VERY MOIST, BLACK, MODERATE DECOMPOSITION	
							DIRT, TRASH, MIX, VERY MOIST, BLACK, MODERATE DECOMPOSITION	
150							DIRT, TRASH, MIX, VERY MOIST, BLACK, MODERATE DECOMPOSITION	
							TOTAL DEPTH=160' BGS	
175								
200								
225								
250								

BORING NUMBER : LW-1

LOG OF BORING

SHEET 1 OF 2

PROJECT NAME: CENTRAL LANDFILL WELL EXPANSION #4

DRILL MANUFACTURER/MODEL: CRV-Bucket/Auger Track

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/30/99

COMPLETION DATE: 8/30/99

TYPE OF BIT: Bucket/Auger

BORE HOLE DIAMETER: 36"

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL
							TRASH, BLACK, MOIST	6" HDPE SDR11
25							BLACK MUD, WET, WOOD	
50								
							SAME, WET	
75							SAME, WET	
100							SAME, WET	
125							SAME, WET	

LOG OF BORING

BORING NUMBER : LW-1

SHEET 2 OF 2

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/30/99

COMPLETION DATE: 8/30/99

DRILL MANUFACTURER/M

CRV-Bucket/Auger Trac

TYPE OF BIT: Bucket/

BORE HOLE DIAMETER:

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL
							SAME	
							TOTAL DEPTH=140' BGS	
150								
175								
200								
225								
250								

LOG OF BORING

BORING NUMBER : LW-2

SHEET _1_ OF _1_

PROJECT NAME: CENTRAL LANDFILL
WELL EXPANSION #4

DRILL MANUFACTURER/MODE

CRV-Bucket/Auger Track

PROJECT NUMBER:

DRILLING CONTRACTOR: AGRA

DRILLING METHOD : BUCKET/AUGER

START DATE: 8/11/99

COMPLETION DATE: 8/11/99

TYPE OF BIT: Bucket/Au

BORE HOLE DIAMETER: 36'

LOGGED BY: SCS

DEPTH SCALE (FEET)	SAMPLE NO.	PID READING	INTERVAL	RECOVERY	Blows Per 6 IN. 140# HMR 30" DRP	USCS	LOG OF MATERIAL	GAS WELL INSTALLATION
							DIRT	DIRT FILL
							TRASH, PLASTICS, PAPER, SOME DECOMPOSITION	8" HDPE SDR11
25								
							SAME, MOIST, MODERATE DECOMPOSITION	
50								
	▽						SAME, BLACK, WET, MODERATE DECOMPOSITION	
75								
							PAPER, PLASTIC, WOOD, MODERATE DECOMPOSITIONT	
100							SAME	
							TOTAL DEPTH = 106'	
125								

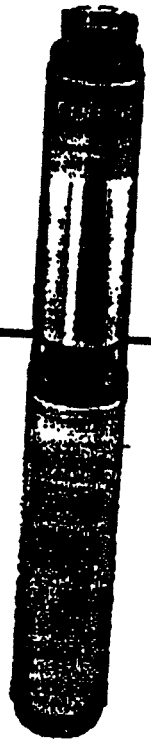
ATTACHMENT “6”

Goulds Model GS

60 Hz High Capacity 4" Submersible Pumps

MODEL

33GS, 55GS



SPECIFICATIONS

Model	Flow Range GPM	Horsepower Range	Best Eff. GPM	Discharge Connection	Minimum Well Size	Rotation①
33GS	10 – 5[illegible]	1 – 7½	35	2"	4"	CCW
55GS	20 – 6[illegible]	1½ – 7½	52	2"	4"	CCW

① Rotation is counterclockwise when observed from pump discharge end.

FEATURES

■ **Powered for Continuous Operation:** All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.

■ **Field Serviceable:** Pump can be rebuilt in the field to like new condition with common tools and readily available spare parts. **NOTE: The Model GS has left hand casing threads.**

■ **Sand Resistant Construction:** Field proven over almost four decades, face clearance design and floating impellers for an extremely abrasion resistant configuration.

■ **Stainless Steel Metal Parts:** AISI types 301, 302, 303 and 304 are corrosion resistant, non-toxic and non-leaching.

■ **FDA Compliant Non-Metallic Parts:** Impellers, diffusers and bearing spiders are constructed of a glass filled engineered composite. This material is corrosion resistant and non-toxic.

■ **Discharge Head:** Precision cast 303 stainless steel for superior strength and durability. Cast in loop for safety line.

■ **Motor Adapter:** Precision cast 303 stainless steel is extremely rigid for accurate alignment of liquid end to motor. Generous space for removal of motor mounting nuts with regular open-end wrench.

■ **Bowls:** Stainless steel for strength and abrasive resistance.

■ **Check Valve:** Built in check valve constructed of stainless steel and low compression, FDA compliant, BUNA rubber for excellent abrasive resistance and quiet, efficient operation.

■ **Stainless Steel Casing:** Polished stainless steel is attractive and durable in the most corrosive water.

■ **Hex Shaft Design:** Six sided shafts for positive impeller drive.

■ **Shaft Coupling:** Exposed for ease of field alignment to motor shaft and to check pump rotation.

■ **Upthrust Plate:** Factory installed, internal water lubricated thrust bearing to help prevent upthrust damage. Bearing protects internal components if pump is operated beyond maximum recommended capacity.

■ **Urethane Upper and Middle Bearings:** Fluted design for free passage of abrasives and excellent resistance to sand damage.

■ **Franklin Electric Motor:**
- Corrosion resistant stainless steel construction through 2 HP, stainless steel casing with nickel plated gray iron end bells on motors over 2 HP.
- Built-in surge arrestor is provided on single phase motors through 5 HP.
- Stainless steel splined shaft.
- Hermetically sealed windings.
- Replaceable motor lead assembly.
- NEMA mounting dimensions.
- Control box is required with 3 wire single phase units.
- Three phase units require a magnetic starter with three leg protection. Magnetic starter and heaters must be ordered separately.

■ **Agency Listings:** All complete pump assemblies are UL Recognized Components and CSA listed and complies with ANSI/NSF std. 61. All 4" Franklin Electric Motors are UL Recognized Components.

"GS" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	AISI 303 SS
Check Valve Poppet	AISI 304 SS
Check Valve Seal	BUNA, FDA compliant
Check Valve Seat	AISI 304 SS
Check Valve Retaining Ring	AISI 302 SS
Bearing Spider	Glass Filled engineered composite
Upthrust Plate	AISI 304 SS, Powder Metal
Retaining	AISI 301 SS
Diffuser	Glass Filled engineered composite
Impeller	
Bowl	AISI 304 SS
Shaft Sleeve	AISI 304 SS, Powder Metal
Bearing	Urethane, FDA compliant
Shim	AISI 304 SS
Spacer	AISI 304 SS, Powder Metal
Screws – Cable Guard	AISI 304 SS
Motor Adapter	AISI 303 SS
Casing	AISI 304 SS
Shaft	
Coupling	AISI 304 SS, Powder Metal
Cable Guard	AISI 304 SS

AGENCY LISTINGS

Canadian Standards Association

Underwriters Laboratories Recognized Components

Classified ANSI/NSF 61-1992

ORDER NUMBER CODE

33 GS 15

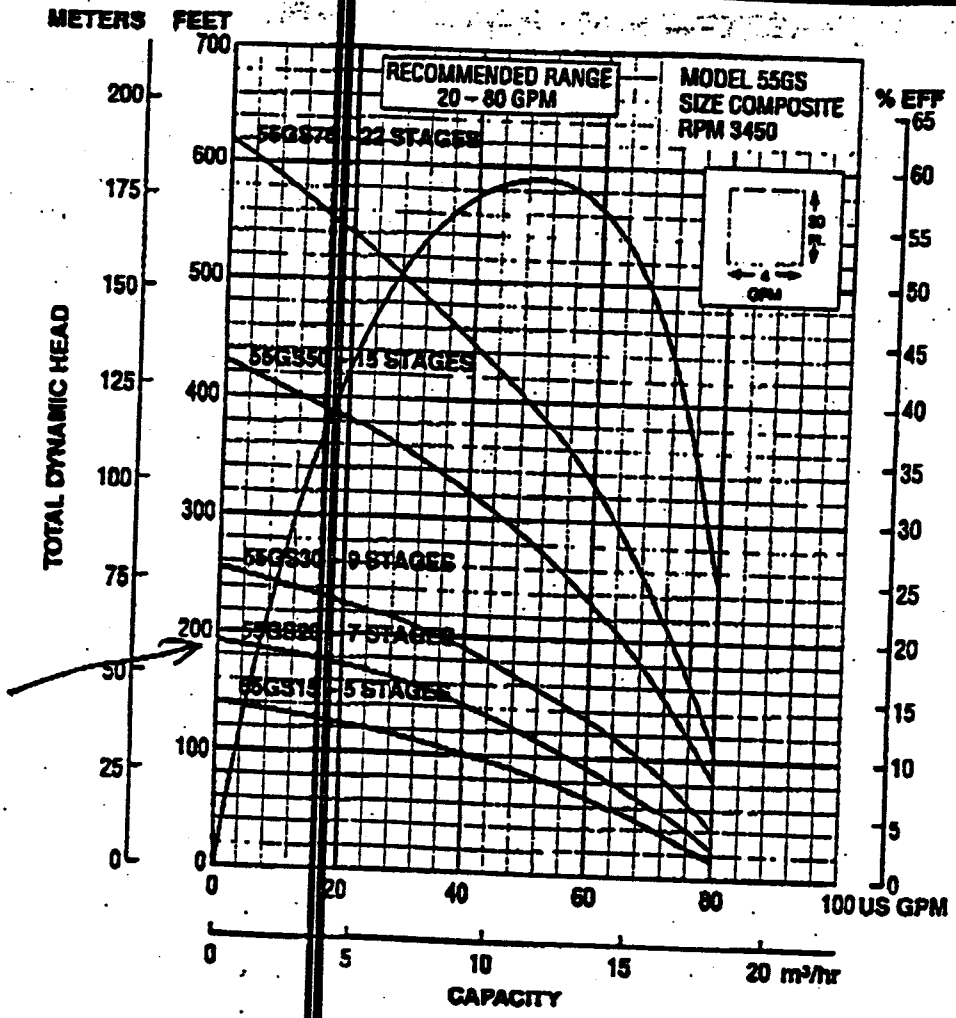
Model — 33, 55

GS Pump Series

Horsepower Code
10 = 1 [illegible] = 3
15 = 1½ [illegible] = 5
20 = 2 [illegible] = 7½

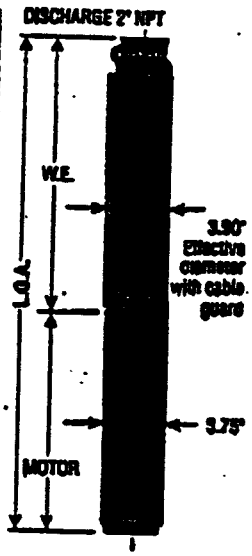
Model 55GS

GOULDS PUM
ITT Industries



MENSIONS AND WEIGHTS

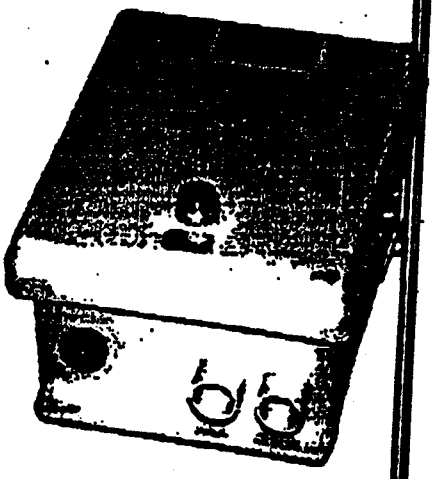
HP	Stages	W.E. Order No.	Motor Order No.	PH	Motor Volts	Motor Length	W.E.① Length	L.O.A.②	W.E. and Motor Weight
1½	5	55GS15	S07940	1	230	13.5	17.1	30.7	37
			S07978	3	200	11.8	17.1	28.9	32
			S07970		230				
			S07975		460				
			S07979*		575				
2	7	55GS20	S08940	1	230	15.1	21.2	36.3	40
			S08978	3	200	13.8	21.2	34.9	38
			S08970		230				
			S08975		460				
			S08979		575				
3	9	55GS30	S09940	1	230	23.5	25.3	48.8	66
			S09978	3	200	20.5	25.3	45.9	57
			S09970		230				
			S09975		460				
			S09979		575				
5	15	55GS50	S10940	1	230	29.5	39.0	68.5	91
			S10978	3	200	23.6	39.0	62.6	75
			S10970		230				
			S10975		460				
			S10979*		575				
7½	22	55GS75	S119784	3	200	29.6	53.0	82.6	95
			S119704		230				
			S119754		460				

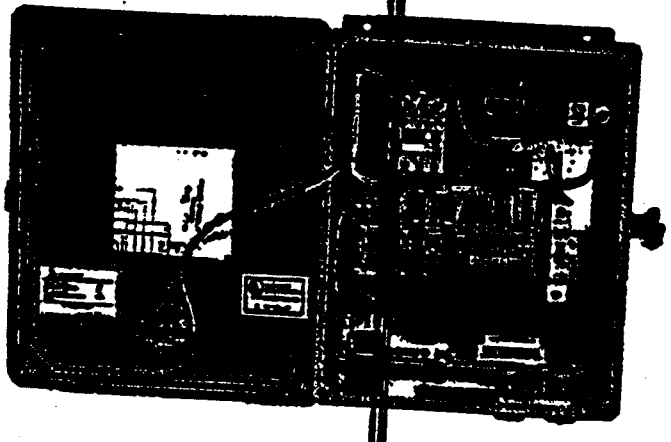


NOTES:
For complete pump, order water end and motor.
① W.E. – water end or pump without motor.
② L.O.A. – length of assembly – complete pump – water end and motor.
* Non-stock motors have a 8 week lead time.

Simplex Control Panels

Submittal Data Sheet





General

OSI Simplex Control Panels are specifically engineered for pressure sewer (STEP) systems, on-site septic treatment systems, and for pump control into conventional gravity systems. Standard features include circuit breakers, an automatic/manual/off toggle switch, automatic motor control operation, and an audio/visual high water alarm with auto reset. Other standard features and options are listed on page 2. OSI Panels are designed for use with either mechanical or mercury float switches. Listed per UL 508; a UL-Canada listing is available.

Applications

OSI Simplex Control Panels are used to control effluent pumps, alarms, and other equipment as specified in pressure sewers and on-site septic systems.

Standard Models

S 1, S 2.

Model Code Nomenclature:

S X XXXX

Indicates selected options (see p.2).

Indicates voltage.
1 = 120 VAC.
2 = 240 VAC.

Specifications

Panel Enclosure:	Measures 10" high x 8" wide x 5 1/8" deep. NEMA 4X rated. Constructed of UV resistant fiberglass; hinges and latch are stainless steel.
S1 Panel Ratings:	120 VAC, 1 hp, 16 amps, single phase, 60 Hz.
S2 Panel Ratings:	240 VAC, 3 hp, 16 amps, single phase, 60 Hz.

Simplex Control Panels (continued)

Standard Features

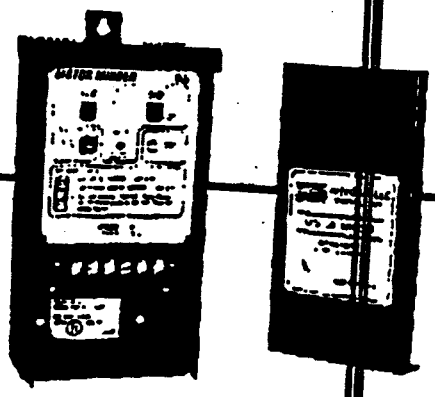
Feature	Specification(s)
Motor-Start Contactor	120 VAC: rated for 24 FLA, 1 hp, 60 hz; 1.25 million cycles at FLA, 2.5 million at 1/2 FLA. 240 VAC: rated for 24 FLA, 3 hp, 60 hz; 1.25 million cycles at FLA, 2.5 million at 1/2 FLA.
Circuit Breaker	20 amps, OFF/ON switch. Single pole 120V, double pole 240V. DIN rail mounting with thermal magnetic tripping characteristics.
Toggle Switch	Single pole-double throw HOA switch rated at 20 amps.
Fuse Disconnect	5 amps, 10,000 AIC fuse with DIN rail mount.
~~Audio Alarm~~	~~88 db at 24", warble-tone sound.~~
~~Audio Alarm~~	~~115 VAC, automatic reset, DIN rail mount.~~
~~Silence Relay~~	
~~Visual Alarm~~	~~7/8" diameter red lens (oil-tight). Push-to-silence, NEMA 4 rated.~~

Optional Features

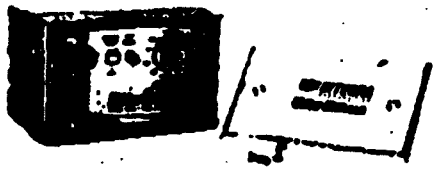
Feature	Specification(s)	Product Code Adder
~~Intrinsically Safe Control Relays~~	~~120 VAC, secondary current operates at 10.5V, 2.1 mA. Listed per UL 913, CSA listed.~~	IR
Programmable Timer	110 VAC, 5 amps, single pole-double throw relay output, repeatable cycle from [illegible] seconds to 10 hours with 4 time ranges. Separate variable controls for OFF & ON time periods.	PT
~~Redundant Off Relay~~	~~Provides a secondary [illegible]. Sounds alarm on low water condition. Rated at 7.5 amps at 120 VAC, 7 amps at 240 VAC.~~	RO
~~Heater~~	~~10 watt/120 V anti-condensation heater with fuse.~~	HT
Disconnect Switch	Single pole-single throw, 20 amps, motor rated at 1 hp.	DS
Elapsed Time Meter	120 VAC, 7-digit, non-resettable. Limit of 99,999 hours; accurate to 0.01 hours.	ETM
Event Counter	120 VAC, 6-digit, non-resettable.	CT
Pump Run Light	7/8" oil-tight green lens (standard color). 3 watt bulb; 120 VAC.	PRL

Goulds model 401 [illegible] motor check

Pump Monitoring Controls



Motor Minder



Motor Check

SPECIFICATIONS

- Power Consumption: 3 watts (max.)
- Control voltage (+/- 10%): 115/230 VAC
- Response times:
  dry well – 3 seconds (max.)
  air lock – 30 seconds
  rapid cycle (2 seconds start/stop) – 6 cycles
- Pilot duty rating: 960 VA
- Term block rating: 230 V, 28 amp
- Output contact rating: 2.5 HP at 230 VAC
- Horsepower range: (see model listing on other side)
- Operating temperature: -20° C to 85° C
- Weight:
  Panel mount: 1.5 lbs.
  With 3R enclosure: 3.5 lbs.
- Enclosure dimensions: 8.5" x 4.5" x 3"

FEATURES

■ **Full Adjustability:** Adjust the "load setting" and "trip point threshold" to meet your precise sensitivity requirements. "Automatic restart timer" adjusts from 9 minutes to 4 hours.

■ **Light Bar Display:** Used for calibration and monitoring load status. As the current drops, the lights descend toward your pre-set threshold. If the system is about to go off you can adjust consumption accordingly.

■ **Easy to Install:** Installs in minutes on new or existing systems. No plumbing required. Heavy-duty lug-type terminal. Rain-tight housing.

■ **Linear Toroid Sensing:** INTEGRA uses an exclusive linear toroid which senses current flow magnetically. This method is more reliable under locked rotor or other high current conditions.

■ **Choose from 6 Models:** There is a Motor Minder™ to fit virtually any pump system – from single phase to three phase, from 115 V to 460 V, from 1/20 HP to 50 HP. Available in code-approved enclosure or panel-mount.

■ **Built-in Transient Protector:** Protects the control from damage caused by lightning or line-voltage surges.

■ **One-Year Warranty:** Solid state construction, state-of-the-art engineering and quality craftsmanship make Motor Minder™ an affordable device you can count on for many years.

SPECIFICATIONS

Model 401B

- Operating voltage: 115 VAC (+/- 10%)
- Horsepower rating: ½ to 1.0 HP

Model 401A

- Operating Voltage 230 VAC (+/- 10%)
- Horsepower rating: ½ to 2.0 HP
- Motor type 1 phase: indication
- Power consumption: 1 watt (max.)
- No load response time: 2 to 4 seconds
- Output contact rating: 2 HP 230 VAC
- Sensitivity calibration: field adjustable
- Restart timer range: 5 to 75 minutes or manual reset
- Indicator: trip point LED
- Enclosure. UL listed weather proof bell box and cover
- Outside dimensions: 2¾" x 4½" x 3" deep
- Color: aluminum gray
- Weight: 1 lb. 4 oz.

FEATURES

■ **Pump Motor:** Works on any two or three wire motor (up to 2 HP, single phase).

■ **Calibration:** Calibrate to your pumping system conditions.

■ **Installation Friendly:** Comes complete – nothing more to buy. Standard weather proof enclosure and mounting hardware are included. Compact single-gang enclosure fits anywhere. Mounts anywhere – before or after the pressure switch, or the control box or at the pump (non-submersible).

■ **Bypass Setting:** No need to wire around device to test other components.

■ **Restart:** Automatic or manual restart. Adjustable from 5 to 75 minutes.

■ **Reliable Performance:** High quality sophisticated solid state technology meets the demands of the most grueling conditions.

■ **Warranty:** We are totally committed to ensuring your total satisfaction. One year warranty.

© 1995 Goulds Pumps, Inc.

ATTACHMENT "7"

interoffice
MEMORANDUM

To: Alex Sebastian
From: Robert Sprinkle
Date: September 18, 1999
Subject: Pump Locations

The following is a list of wells that I have reviewed and determined to be good candidates for the submersible pumps to be installed. There are eleven proposed locations for these pumps listed below:

Well #10	Well #12	Well #22	Well #24	Well #39-R	Well #64
Well #68	Well #70	Well #76	LW-1	LW-2	

The wells in the north upper fill area were selected (wells #10 and #12) in order to lower the leachate level to expose more of the well's perforations. This will allow a large quantity of gas to be collected here and prevent any possible offsite gas migration in this area.

Wells #22 and #24 in the upper fill area were selected due to their geographic position, depth, well integrity, and high leachate level. Several other wells in the upper fill area could still have pumps installed. But, it is unknown at this time how much effective area the draw down of a pump ~~will impact~~.

Of the wells that were newly installed, wells #64, #68, #70 & #76 were selected on the basis of their leachate levels. In each case, these wells have neighboring wells with similar leachate levels. This leads me to believe that there is a lense or level of leachate with some type of continuity between them. This would suggest that pumping down one well would influence and lower the level in its neighbor, decreasing the number of necessary pumps. If this does not occur, additional pumps will need to be installed

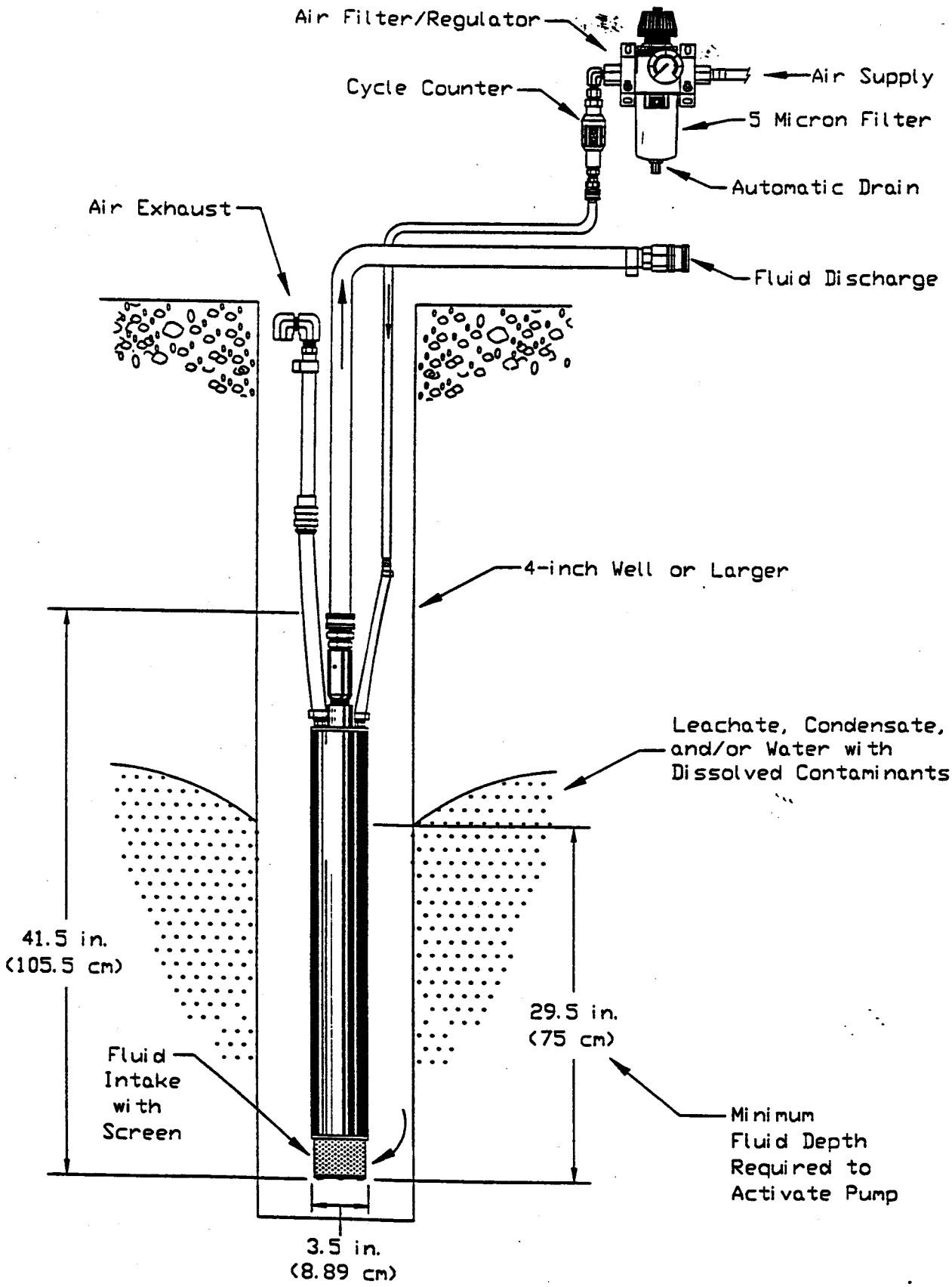
LW-1 and LW-2 were installed directly over the old canyon that ran through the middle of the landfill. These two wells were drilled in these locations to maximize the depth at which we could collect the leachate.

Well #39-R replaced well #39. It was installed using an 8" HDPE pipe to allow for a pump. The well was constructed below the leachate level that is influenced by the 8" Westerly Leachate Collection System. This will enable pumping to occur below the passive collection level of the Westerly Leachate Collection Line.

If you have any question, please do not hesitate to ask.

SHORT AP-4/BL LEACHATE

Short AutoPump 4-Inch Bottom-Loading Controllerless Leachate and Condensate Pumping System

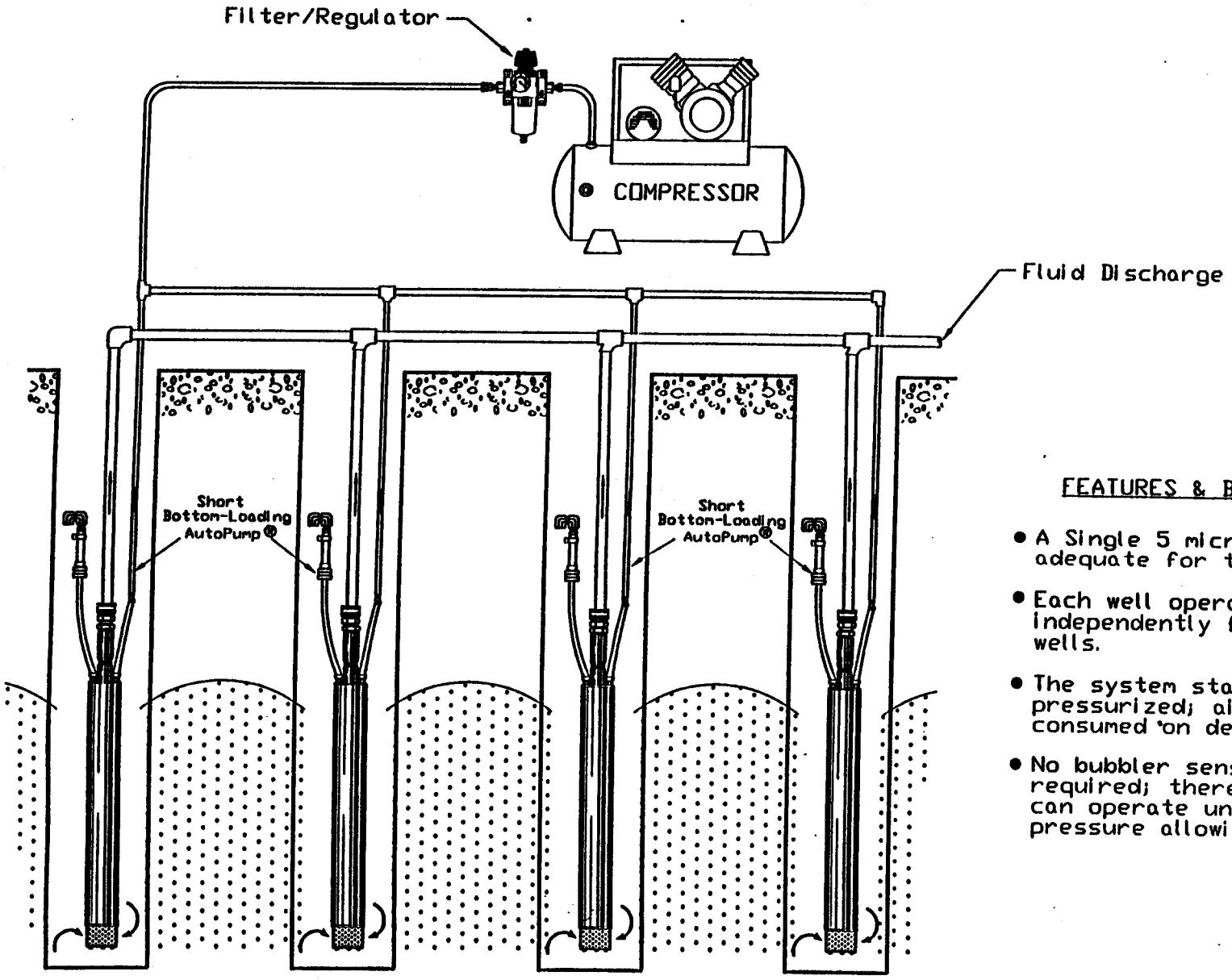


Clean Environment Equipment

Equipment for groundwater remediation and leachate extraction

TOLERANCES UNLESS OTHERWISE SPECIFIED	APPROVALS	DATE	TITLE
ANGULAR : ±.5° FRAC : .XXX : .005 .XX : .01 .XXXX : .0005	DRAWN RILEY ENGLISH	12-12-96	SHORT AP-4/BL LEACHATE
	DESIGNER MIKE K. ROSEN		

MULTI-WELL SHORT AP-4/BL LEACHATE



FEATURES & BENEFITS

- A Single 5 micron filter is adequate for the system.
- Each well operates independently from adjacent wells.
- The system stays fully pressurized; air is only consumed "on demand".
- No bubbler sensors are required; therefore the pumps can operate under a vacuum or pressure allowing gas collection.

Clean Environment Equipment
Equipment for groundwater remediation and leachate extraction
1133 Seventh Street • Oakland, CA 94607 • U.S.A.
(800) 537-1767 • (510) 891-0880 • FAX (510) 444-6789

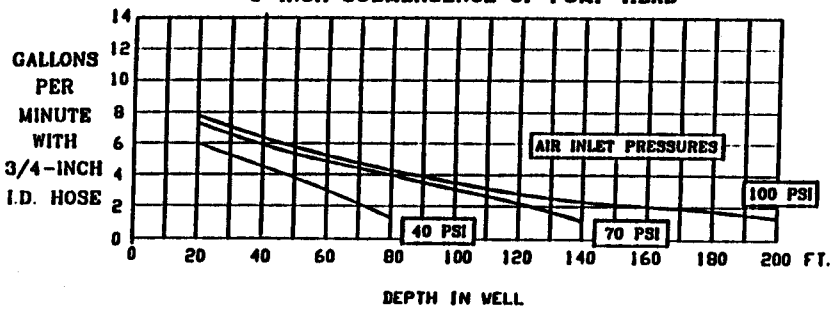
TOLERANCES UNLESS OTHERWISE SPECIFIED ANGULAR : .5° FRAC : .XX : .01 .XXX : .005 .XXXX : .0005	APPROVALS	DATE	TITLE MULTI-WELL SHORT AP-4/BL LEACHATE
MATERIAL	DRAWN RILEY ENGLISH	12-16-94	
	DESIGNED MIKE K. BRESLIN	7-10-96	DRAWING No. 600433B
FINISH	CHECKED MIKE K. BRESLIN	7-10-96	REV 6-25-96
	APPROVED MIKE K. BRESLIN	7-10-96	SCALE NONE SHT OF

SHORT AP-4/BL LEACHATE PERFORMANCE CURVES

3/4-INCH INSIDE DIAMETER DISCHARGE HOSE

*MAXIMUM FLOW RATES**

6-INCH SUBMERGENCE OF PUMP HEAD



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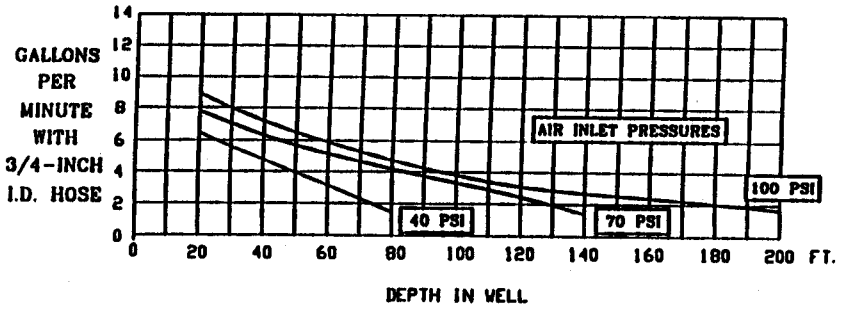

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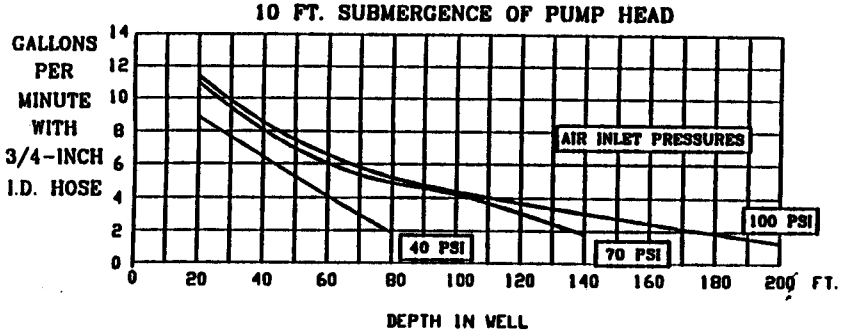

1-INCH INSIDE DIAMETER DISCHARGE HOSE

*MAXIMUM FLOW RATES**

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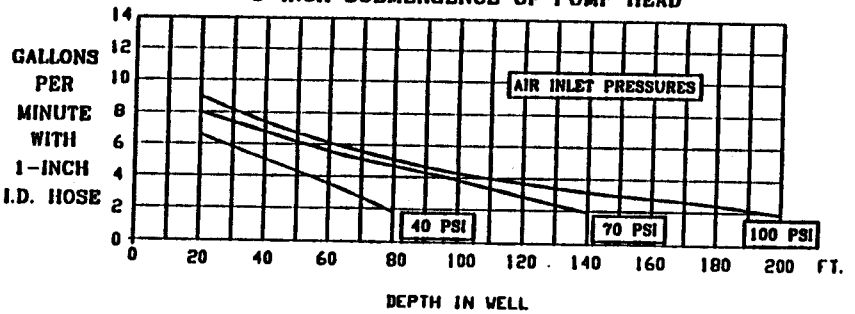

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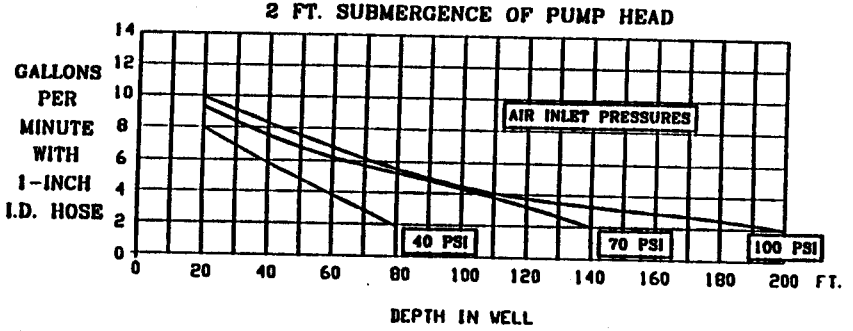

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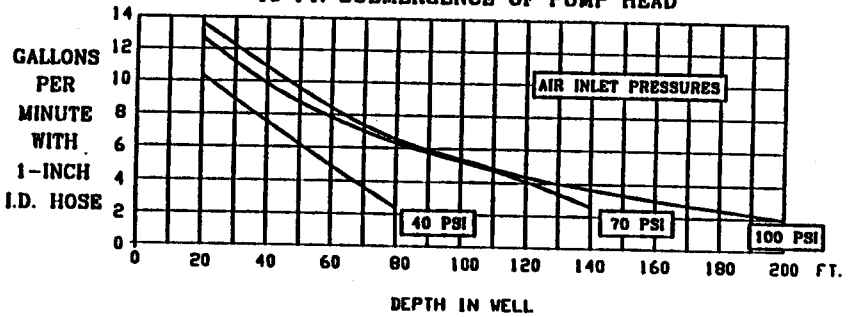

*** FLOW RATES MAY VARY WITH ON-SITE CONDITIONS.**
CALL CEE FOR TECHNICAL ASSISTANCE.

Clean Environment Equipment

Equipment for groundwater remediation and leachate extraction

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TOLERANCES UNLESS OTHERWISE SPECIFIED ANGULAR : .5° FRAC : .XXX : .005 .XX : .06 .XXXX : .0005	APPROVALS	DATE	TITLE SHORT AP-4/BL LEACHATE PERFORMANCE CURVES
MATERIAL	DRAWN TONY RAMIREZ	8-3-94	
	DESIGNER MIKE K BRESLIN	6-22-96	DRAWING No. 600461B
	CHECKED MIKE K BRESLIN	6-22-96	REV. 6-17-96

APPENDIX B-15

PUBLIC TIPPING FACILITY

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403
Edward J. Walker, Director

AREA CODE (707)

ROADS	565-2231
TRANSIT	585-7516
REFUSE	565-2231
AIRPORT	524-7243
AIR POLLUTION	433-5911
FAX	565-2620

January 10, 2000

File: 50-01-17.6

Mr. Robert A. Swift, LEA
Sonoma County Health Services
Environmental Health Division
1030 Center Drive, Suite A
Santa Rosa, CA 95403

Re: Central Disposal Site (49-AA-0001)
Application for Solid Waste Facility Permit Revision
Transmittal of Response to Item No. 5 of DOHS Letter of December 20, 1999.

Dear Mr. Swift:

This submittal is in response to Item No. 5 of your letter of December 20, 1999. As stated in your letter, the proposed public tipping facility is required to meet the Title 14 California Code of Regulations General Design Requirements, Operating Standards, and Record Keeping Requirements (14 CCR 17406-17419). As you requested, the detailed information in the attached document is presented to demonstrate how the proposed public tipping facility will comply with these standards.

If you have any questions or require any additional information, please call me at 792-4958 at your convenience.

Very truly yours,

EDWARD J. WALKER, DIRECTOR
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Don R. Poindexter, Sr. Civil Engineer

Attachment: Supplemental Comments, 14 CCR Chapter 3 (§17406-17419)

cc: Ken Wells
Susan Klassen

F

SUPPLEMENTAL COMMENTS REGARDING COMPLIANCE WITH TITLE 14 CCR, CHAPTER 3

MINIMUM STANDARDS FOR SOLID WASTE HANDLING AND DISPOSAL

Article 6.1. Siting and Design

§ 17406.1 Siting on Landfills.

Not applicable. The proposed facility will not be located on the landfill. § 17406.2.

General Design Requirements.

(a) Persons competent in engineering, architecture, landscape design, traffic engineering, air quality control, and design of structures performed the design of the proposed facilities. The design team included EBA Wastechnologies, Roger J. Wilson, Architect, and Kenneth R. Hughes, Structural Engineer.

(b) The design of the proposed facilities was based on the Sonoma County service area, the anticipated nature and quantity of wastes to be received (based on past experience at Central Disposal Site), local climate, physical and topographic settings, adjacent land use, traffic within and near the facility, on-site parking for transfer vehicles, drainage control, the hours of operation, and public and employee safety. The design allows for expansion, if warranted by increases in waste quantities in the future.

(c) The subject facilities were designed to limit waste handling to a limited area within a roofed structure with a wall on the upwind side to control windblown material. The propagation or attraction of flies, rodents, and other vectors will be controlled by the prompt handling and disposal of waste in the facility. A mist system is planned for dust control. Noise will be controlled by insulation within the structure and by limiting the number of vehicles within and adjacent to the structure. Public safety is addressed by eliminating elevation differentials in the floor slab where the public unloads waste and by preventing the public from entering the floor operations area.

(d) The details of the proposed facility design related to odor control measures, personnel health and safety, and sanitary facilities are available for review in the final draft construction drawings and are included in the Joint Technical Document with the Application for Solid Waste Facility Permit Revision.

(e) Any solid waste containers that may be used will be durable, easily cleanable, designed for safe handling, and constructed to prevent loss of wastes from the container during storage. If such containers are used to store garbage, other wet or liquid producing wastes, or

wastes composed of fine particles, such container shall in all cases be nonabsorbent and leak-resistant. Unloading areas, and disposal truck loading facilities, shall be easily cleanable, designed for safe handling and constructed to prevent loss of wastes.

Article 6.2. Operating Standards

§ 17407.1. Burning Wastes and Open Burning.

(a) It is an operating standard that any burning waste received at the facility, will be separated. from other wastes and deposited in a safe area, away from unloading, transfer, or processing areas, structures on adjacent properties and other fire hazard areas, spread, and extinguished.

(b) Open burning is prohibited at this facility.

§ 17407.2. Cleaning.

(a) The proposed facility will be cleaned each operating day of all loose materials and litter.

(b) The entrance, exit, and public drop-off areas will be cleaned as needed during each operating day to prevent the tracking or off-site migration of waste materials.

§ 17407.3. Drainage Control.

(a) The drainage at and around the perimeter of the site is designed to accomplish the following:

(1) The creation of contact water will be minimized by maintaining the separation of storm water as much as possible. The roof will prevent rainfall from entering the interior of the facility. Exterior perimeter areas will drain away from the facility and into the storm water management system. A system of drain inlets installed in the pavement under the transfer truck loading areas will collect gray water from the tipping floor and direct the flow into a dedicated gray water collection and storage system, which will include an underground storage tank with a capacity of at least 10,000 gallons. The storage tank will be located under a paved area immediately to the south of the proposed facility. The storage tank will have an alarm system to signal when the volume of the tank contents nears the design capacity.

(2) Off-site migration of contact water will be prevented by the design of the floor slab to keep contact water within the roofed structure.

(3) Site drainage is designed to protect the integrity of roads and structures by design and placement of storm drain systems, preventing ponding, controlling run-off, draining rainfall from the structure in a controlled manner utilizing roof gutters, downspouts, and associated storm water controls.

(4) Public health will be protected by limiting public access to the main tipping floor. The public tipping area is at the side of the floor, which substantially reduces incidental contact with the waste and any contact water on the floor of the facility. Waste and any contact water will be removed to the extent possible at the end of each operating day.

(5) Controlling the site and facility drainage as described above will also prevent safety hazards and interference with operations.

§ 17407.4. Dust Control.

(a) To minimize the creation, emission, or accumulation of excessive dust and particulates and safety hazards to the public or site personnel by obscured visibility, the facility will have a misting system installed within the structure. The partially open building perimeter also provides for ventilation to prevent build-up of dust. Roof vents are planned for the structure. Daily operations are managed to minimize handling of waste and perform periodic sweeping and cleaning of the facility floor to enhance dust control.

§ 17407.5. Hazardous, Liquid, and Special Wastes.

(a) Hazardous wastes will not be accepted or stored in the proposed public tipping facility. Hazardous wastes, such as batteries, oil, paint, and approved special wastes will be accepted only at the Household Hazardous Waste Facility at the Central Disposal Site.

(b) For events when unauthorized hazardous wastes are discovered, planned procedures are in place for handling, separation, and temporary storage of such wastes to protect site personnel and the public as well as the environment. Control measures will include consideration of the elimination or control of dusts, fumes, mists, vapors or gases prior to isolation or removal from the facility. On-site personnel are trained to perform their operations related to general chemical, physical, and biological hazards in accordance with the Injury and Illness Prevention Plan, SB 198, July 1999, which is placed and maintained in the operating record. The procedures used for handling household hazardous waste are presented in Appendix B-2 Household Hazardous Waste Exclusion Program and Appendix B-I 1 Load Check Program.

(c) Liquid wastes and sludge will not be accepted at the public tipping facility without prior written approval of the appropriate agencies and the LEA. Such approvals shall be placed in the operating record.

§ 17408.1. Litter Control.

Litter will be collected on a regular basis both on and off-site, as needed, to prevent safety hazards, nuisances and off-site migration to the greatest extent possible given weather conditions. Litter collection fences will be used, if warranted, to reduce off-site migration of litter.

§ 17408.2. Medical Wastes.

Medical waste, unless treated and deemed to be solid waste, shall not be accepted at this facility, unless approved by the EA. On-site personnel are trained to perform their operations related to general chemical, physical, and biological hazards in accordance with the Injury and Illness Prevention Plan, SB 198, July 1999. County personnel handle medical waste in

accordance with the County Refuse Bulletin No. 101, Revised January *5,* 1998, "Procedure for Disposal of Infectious Wastes".

§ 17408.3. Noise Control.

Specific measures have and will be taken to control exposure of site personnel and the public to excess noise. The public will be restricted to the perimeter of the tipping floor to separate the public from the waste handling equipment. The tipping facility is designed with some open wall areas to reduce noise levels within the building. Interior walls and doors separate workers break room and rest room areas from the main floor. Personnel working on or near heavy equipment are provided with hearing protection.

§ 17408.4. Non-Salvageable Items.

Salvaging of drugs, cosmetics, foods, beverages, hazardous wastes, poisons, medical wastes, syringes, needles, pesticides and other materials capable of causing public health or safety problems shall not be permitted at the proposed facility unless approved by the local health agency and the EA.

§ 17408.5. Nuisance Control.

Applicable mitigation measures presented in the Mitigation Monitoring Program for the Operational Improvements, Approved December *15,* 1998 will be complied with at the proposed facility to prevent the creation of a nuisance.

§ 17408.6. Maintenance Program.

The County shall implement a preventive maintenance program to monitor and promptly repair or correct deteriorated or defective conditions. The County has full-time personnel responsible for maintenance of the site grounds and structures.

§ 17408.7. Personnel Health and Safety.

On-site personnel are trained to perform their work in accordance with the Injury and Illness Prevention Plan, SB 198, July 1999. The County has full-time staff responsible for monitoring personnel training and compliance in all h&alth and safety issues. The IPP and the safety and training records are available for review by local and state inspectors during normal business hours.

§ 17408.8. Protection of Users.

The proposed facility has been designed and will be constructed, operated, and maintained so that the contact between the public and solid waste is minimized. Specifically, the facility is designed to have the public dispose of the waste at the perimeter of the building within a public access zone marked with yellow striping to separate the public from the tipping floor

equipment. In addition, the County utilizes personnel as spotters to direct and assist the public and ensure that the public stays out of the main tipping area where heavy equipment is in use.

§ 17409.1. Roads.

All on-site roads and driveways are designed and maintained to minimize the generation of dust and tracking of soil onto adjacent public roads. All public roads into and around the tipping facility, including parking areas, will be paved with asphaltic cement.

§ 17409.2. Sanitary Facilities.

Sanitary and hand-washing facilities, as required by applicable state and local regulatory agencies, are provided in the proposed tipping facility. These facilities will be maintained in a reasonably clean and adequately supplied condition.

§ 17409.3. Scavenging and Salvaging.

The proposed facility will meet the following requirements:

(a) Scavenging is prohibited and on-site personnel are trained to prevent scavenging by the public.

(b) It is not the policy of the County to salvage materials, such as metal, paper, glass and cardboard, from the tipping facility. However, storage bins for these materials are provided for the use of the public. The County personnel floor spotters are trained to encourage the public to separate salvageable materials and place the materials in the bins. In addition, the design of the facility encourages the public to recycle salvageable materials in a separate, adjacent recycle area conveniently placed at the side of the public entrance road. The public must pass alongside the recycle area before going through the scales and cashiers office and the public is encouraged to recycle all appropriate materials.

(c) Salvaging activities, by the public as described above, at the proposed facility will be conducted in a controlled manner and will not interfere with other aspects of site operation. Activities will be conducted so as not to interfere with expeditious entry and exit of vehicles delivering waste to the facility. Salvaging activities will be conducted in specified areas and controlled to prevent health, safety, or nuisance problems.

(d) Storage of materials salvaged from solid wastes will be ancillary to the activities of the facility and will be located in planned, clearly identifiable areas. The materials will be stored and arranged to minimize risk of fire, health and safety hazard, vector harborage, or other hazard or nuisance, and limited to a specified volume and duration. All salvaged materials shall be placed in the approved containers shortly after delivery and shall not be allowed to accumulate outside of the container. The contents of the containers shall be removed immediately when the container becomes full, within 90 days, or as otherwise warranted.

§ 17409.4. Signs.

For the proposed facility, each point of access from a public road will be posted with an easily visible sign indicating the name and location of the facility. At this site, the only public access is from Mecham Road. A sign indicating the name of the facility, hours of operation, and other information is already in place at the entrance of the site access road at its intersection with Mecham Road. Other points of access are limited to site staff and contractors and are clearly posted with "Authorized Personnel Only" signs.

§ 17409.5. Loadchecking.

A load check program (see Appendix B-li) will also be implemented and enforced for the new facility. This program includes the following:

(1) the number of random loadchecks to be performed;
(2) designated locations for the storage of prohibited wastes removed during the loadchecking process that are separately secured or isolated;
(3) records of loadchecks and the training of personnel in the recognition, proper handling, and disposition of prohibited waste. A copy of the loadchecking program and copies of the loadchecking records for the last year shall be maintained in the operating record and be available for review by the appropriate regulatory agencies.

§ 17409.6. Parking.

The proposed facility will comply with all applicable permit, mitigation, land use, and operational restrictions on parking of transfer vehicles. The commercial transfer vehicles that are used at the Central Disposal Site are owned by hauling contractors and are parked and stored off-site.

§ 17410.1. Solid Waste Removal.

All solid waste accepted at the proposed public tipping facility will be removed from the facility within a time frequency approved by the EA to prevent the propagation or attraction of flies, rodents or other vectors.

§ 17410.2. Supervision and Personnel.

A sufficient number of qualified personnel and adequate supervision will be provided by the operator to ensure proper operation of the site in compliance with all applicable laws, regulations, permit conditions and other requirements. The name, address, and telephone number of the Operations Manager is provided on the Facilities Permit Application submitted to the EA. Updated lists of names and telephone numbers of all site operations supervisors are submitted to the EA, included in the JTD, and entered into the operating record periodically as changes occur.

§ 17410.3. Training.

Personnel assigned to the operation will be adequately trained in subjects pertinent to site solid waste operations and maintenance, hazardous materials recognition and screening, use

of mechanized equipment, environmental controls, emergency procedures and related regulatory requirements, as indicated in Section 2.10.3. Training records are maintained at the Operations Headquarters and are available for inspection.

§ 17410.4. Vector, Bird and Animal Control.

The County will take adequate steps to control or prevent the propagation, harborage and attraction of flies, rodents, or other vectors, and animals, and to minimize bird attraction. Specifically, all solid waste will be removed from the facility at the end of each operating day; rodent traps will be set periodically as needed; and bird repellant methods will be employed to discourage nesting.

Article 6.3. Record Keeping Requirements

§ 17414. Record Keeping Requirements.

The County, as operator of the proposed facility, will meet the following requirements:

(a) Records of incoming weights or volumes and outgoing salvage or residual weights or volumes will be maintained in a form and manner approved by the EA. Such records will (1) be submitted to the EA as specified in the SWFP or CIWMB upon request, (2) be adequate for overall planning and control purposes, and (3) be as current and accurate as practicable.

(b) All records discussed above in (a) will be kept by the operator at the Central Disposal Site Operations Headquarters and accessible for three (3) years and will be available for inspection.

(c) The operator will submit copies of specified records to the EA upon request or at a frequency approved by the EA.

(d) A daily log book or file of special occurrences encountered during operations and methods used to resolve problems arising from these events, including details of all incidents that required implementing emergency procedures. Special occurrences include but are not limited to: fires, injury and property damage, accidents, explosions, receipt or rejection of prohibited wastes, lack of sufficient number of personnel pursuant to section 17410.2, flooding, earthquake damage and other unusual occurrences. The operator will notify the EA by telephone within 24 hours of all incidents requiring the implementation of emergency procedures, unless the EA determines that a less immediate form of notification will be sufficient to protect public health and safety and the environment.

(e) The operator will record any written public complaints received by the operator, including (1) the nature of the complaint, (2) the date the complaint was received, (3) if available , the name, address, and telephone number of the person or persons making the complaint, and (4) any actions taken to respond toe complaint. The records of complaints will be available for inspection at Central Disposal Site Operations Headquarters.

(f) The operator will maintain a copy of the written notification to the EA and local health agency of the name, address and telephone number of the operator or other persons responsible for the operations as required by section 17410.2. The record of such written notification will be available for inspection at Central Disposal Site Operations Headquarters.

(g) The operator will maintain records of employee training as required by section 17410.3. The records of employee training will be available for inspection at Central Disposal Site Operations Headquarters.

(h) Records as required by section 18890 et seq. will be maintained by on-site personnel.
The records will be available for inspection at Central Disposal Site Operations Headquarters.

§ 17414.1. Documentation of Enforcement Agency Approvals, Determinations, and Requirements.

The operating record will include all authorized approvals, determinations, and other requirements made and submitted in writing by the EA.

Article 6.35. Additional Operating Requirements for Facilities Only.

§ 17415.1. Communications Equipment.

Adequate communication equipment will be available to site personnel to allow quick response to emergencies. Such equipment will consist of, but not be limited to, two-way radios and public address systems.

§ 17415.2. Fire Fighting Equipment.

The proposed facility will have fire suppression equipment continuously available. Such equipment will be located and properly maintained as required by the local fire authority.

§ 17416.1. Housekeeping.

The operator will provide adequate housekeeping for the maintenance of facility equipment and shall minimize accumulations of fuel drums, inoperable equipment, parts, tires, scrap, and similar items.
§ 17416.2. Lighting.

The facility and/or equipment will be equipped with adequate lighting, with both natural and artificial means, to ensure the ability to monitor incoming loads, effectiveness of operations, and public health, safety and the environment. Overhead electric lights and translucent panels in the roof will be provided. Heavy equipment for moving waste on the tipping floor will have lights.

§ 17416.3. Equipment.

Equipment will be adequate in type, capacity and number, and sufficiently maintained to allow the facility to meet all requirements of Articles 6.3 and *6.35.*

§ 17418.1. Security.

The facility is designed to discourage unauthorized access by persons and vehicles. Security gates at entrances to the disposal site and at the entrance to the public tipping facility area will be closed and locked during non-operating hours. The perimeter of the Central Disposal Site is fenced to discourage access by persons and vehicles. In addition, access to the site is restricted by topography, consisting of areas of moderate to steep slopes, and by adjacent private property used for agriculture, which is not accessible to the public.

§ 17418.2. Site Attendant.

The proposed facility.will have an attendant present during public operating hours to ensure that it meets all of the requirements of Articles 6.2, 6.3, and *6.35.*

§ 17418.3. Traffic Control.

Traffic flow through the proposed facility will be controlled the following ways:

(1) Public and commercial access to the proposed facility, which is located within the existing Central Disposal Site, is provided by an internal access road that connects to Mecham Road. No significant changes in traffic into the site are expected since the primary change will be to redirect existing flow of public vehicles to the tipping facility instead of the previously used tipping aprons on the landfill. Therefore, the proposed facility will not interfere with or create a safety hazard on adjacent public streets or roads.

(2) On-site safety hazards will not be created by the routing of traffic since all public vehicles must pass along a dedicated one-way road that leads to the facility past the recycle area, through the scales/cashier booths, into the facilitybuilding, then exiting along a separate one-way road from the facility back to the main access road. Trucks that deliver waste from the proposed facility will travel to and from the landfill tipping aprons without mixing with public vehicles. Commercial vehicles will travel the main access road and go directly to and from the landfill tipping aprons without entering the public tipping facility area.

(3) Traffic control includes separation of public vehicles from operations and associated heavy equipment as much as practicable by limiting public access to designated tipping areas at portions of the perimeter of the facility.

§ 17419.1. Visual Screening.

The facility is shielded from outside public view by a ridge line that separates the facility area from Mecham Road. The proposed structure is designed to be similar to previously constructed transfer stations within the County, all of which were approved by the local land use authority.

§ 17419.2. Water Supply.

A safe and adequate water supply for emergency and general operations use already exists at the site. The water source is a County-owned well located near the intersection of Stony Point Road and Mecham Road. The water is treated with chlorine at the well site and is periodically tested for contaminants as required by the local health agencies. Water is pumped to storage tanks on a ridge at the north end of the Central Disposal Site. Storage is provided in one 100,000-gallon steel tank and a 50,000-gallon wood tank. An additional 100,000-gallon steel tank will be constructed before the proposed facility is constructed, for a total storage capacity of 250,000 gallons. Although the well water is chlorinated and tested, it is not used for drinking. Drinking water is provided by commercial drinking water suppliers in bottles and is available in offices and break rooms.

APPENDIX C

Central Disposal Site Development

APPENDIX C-1

Sequencing Plan for 1997 – 1999 for Central Landfill

APPENDIX C-2

Storm Water Pollution Prevention Plan

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS
575 ADMINISTRATION DRIVE, ROOM 117A
SANTA ROSA, CALIFORNIA 95403

Edward J. Walker, Director

AREA CODE (707)

ROADS	527-2231
TRANSIT	585-7516
REFUSE	527-2231
AIRPORT	524-7243
AIR POLLUTION	433-5911
FAX	527-2620

May 14, 1999

File 50-01-17.18

Mr. Robert L. Tancreto
Senior Water Resources Engineer
California Regional Water Quality Control Board, North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Re: Transmittal of Revised Storm Water Pollution Prevention Plan, May 1999
Central Disposal Site, 500 Mecham Road, Petaluma, CA

Dear Mr. Tancreto:

Please find attached the revised Storm Water Pollution Prevention Plan (SWPPP), dated May 1999, for the referenced site. The prior SWPPP, dated October 1998, described recent changes to site conditions and Best Management Practices (BMPs) implemented and planned for the Central Disposal Site for the winter of 1998/99. This revised SWPPP, dated May 1999, includes new BMPs relative to the planned Rock Extraction Project, which is scheduled to commence in May 1999 as well as BMPs for the other Central Disposal Site operations for the winter of 1999/2000. The County intends to revise the BMPs as needed prior to October 1999, depending on any additional changes in site conditions.

The SWPPP also includes the following updated documents:

1. Erosion Control Plan (Revised May 1999)

2. Leachate Management Plan (Revised May 1999)

3. Leachate Seep Control Plan (Revised May 1999)

Under separate cover, the County is also submitting a Spill Prevention, Control and Countermeasure Plan and Contingency Plan, dated May 1999, for the Central Disposal Site.

If you have any questions or need additional information, please contact me at (707) 792-4958.

Very truly yours,

EDWARD J. WALKER, DIRECTOR
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

_____
Don R. Poindexter, Sr. Civil Engineer

Enclosure: SWPPP, Central Landfill Site, May 1999

c: Ed Walker, Ken Wells, Susan Klassen
Sheryl Bratton, w/encl.
Bob Swift, LEA, Sonoma County Environmental Health, w/encl.
Dave Evans, Terri Kinney, RWQCB, w/encl.
Tim Mayer, PRMD - Environmental, w/encl.
Paul Paddock, Will Bakx, Sonoma Compost, w/encl.
Charlie Young, Stony Point Rock Quarry, Inc.,w/encl.

STORM WATER
POLLUTION PREVENTION PLAN

FOR

CENTRAL DISPOSAL SITE
SONOMA COUNTY, CALIFORNIA

SONOMA COUNTY

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

INTEGRATED WASTE DIVISION

Administrative Office
575 Administration Drive, Room 117A
Santa Rosa, CA 95403
Phone: (707) 527-2231

Operations Headquarters
Central Landfill
500 Mecham Road
Petaluma, CA 94952
Phone: (707) 792-0547

December 1992

Revised
November 1994
February 1995
August 1997
October 1998
May 1999

STORM WATER
POLLUTION PREVENTION PLAN
CENTRAL DISPOSAL SITE

Revised May 1999

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ATTACHMENTS:

TABLE A ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES

TABLE B STORM WATER BEST MANAGEMENT PRACTICES, CENTRAL COMPOST SITE FOR 1999/2000

FIGURE 1 LOCATION MAP
FIGURE 2 SITE PLAN
FIGURE 3 SITE MAP - On-Site Structures Material Processing & Storage
FIGURE 4 EROSION CONTROL PLAN FOR 1999

EXHIBIT 1 Notice of Intent for General Permit to Discharge Storm Water Associated with Industrial Activity WQ Order No. 97-03 DW, May 19, 1997

EXHIBIT 2 Erosion Control Plan (Revised May 1999)

EXHIBIT 3 Leachate Management Plan (Revised May 1999)

EXHIBIT 4 Leachate Seep Control Plan (Revised May 1999)

EXHIBIT 5 California Regional Water Quality Control Board North Coast Region Monitoring and Reporting Program 97-49

EXHIBIT 6 Interim Sampling Plan, EBA Wastechnologies, February 3, 1998

EXHIBIT 7 State of California General Industrial Activities Storm Water Permit

STORM WATER
POLLUTION PREVENTION PLAN

FOR
CENTRAL DISPOSAL SITE
Revised May 1999

SECTION 1: INTRODUCTION

This section provides an introduction to the organization of the Storm Water Pollution Prevention Plan (SWPPP). The facility first submitted a Notice of Intent for the Permit to Discharge Storm Water associated with Industrial Activity WQ Order No. 91-13 DWQ on October 24, 1992. This amended or updated report was prepared to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit) and Waste Discharge Requirements for Discharges of Industrial Storm Water Associated with Industrial Activities Excluding Construction Activities (See Appendix A).

The SWPPP for this facility was first prepared in December 1992. It was subsequently revised in November 1994, February 1995, and was modified in August 1997 to reflect the changes required in the SWPPP required by State Water Board Water Quality Order No. 97-03-DWQ. Pursuant to that order, the County submitted a revised Notice of Intent on May 19, 1997 (Permit Identification Number 1 24S006101). The SWPPP was revised in October 1998 to describe various changes in site conditions and personnel and to present modified Best Management Practices as applied to the landfill and compost operations. This revision in May 1999 is to update the SWPPP to describe additional changes in site conditions and personnel and to include the Rock Extraction Project, which is scheduled to commence in May 1999.

1.1 PURPOSE OF THE SWPPP

Federal regulations, administered by the California Regional Water Quality Control Board (RWQCB), requires Refuse Disposal Sites to have a General Industrial Storm Water Permit (hereafter referred to as the "Permit"). The purpose of the regulations is to protect water quality by reducing the amount of pollutants in the storm water. The regulations require the preparation of a Storm Water Pollution Prevention Plan (SWPPP). This plan identifies and evaluates sources of pollutants associated with operations at the site and describes the best management practices that will be taken to reduce or prevent storm water pollution.

1.2 BEST MANAGEMENT PRACTICES IMPLEMENTATION COMMITTEE

The permit requires that the SWPPP identify personnel to oversee the implementation of any measures to reduce pollution called Best Management Practices (BMPs) and modify the SWPPP as necessary over time. These personnel and their responsibilities are described in the following table.

BMP IMPLEMENTATION COMMITTEE

Individual	Title	Responsibility
Susan Klassen	Facility Manager	Overall responsibility for development and implementation.
Don Poindexter	Senior Civil Engineer	Responsibility for development of SWPPP, BMPs and monitoring.
Steve Urbanek	Civil Engineer	Responsible for design and implementation of erosion control plan and supervision of monitoring.
Joe Kase	Field Technician	Responsible for monitoring, maintenance of records and submittal of Annual Reports.
Paul Paddock	Sonoma Compost Contract Facility Manager	Responsible for implementation of specific BMPs.
Bret Boccabella	Empire Waste Management Contract Facility Manager	Responsible for implementation of specific BMPs.
Judy Smith	Garbage Recycling Incorporated Contract Facility Manager	Responsible for implementation of specific BMPs.
Charlie Young	Stony Point Rock Quarry, Inc. Contract Facility Manager	Responsible for implementation of specific BMPs.

1.3 IMPLEMENTATION SCHEDULE

Existing best management practices already implemented will continue through the next rainy season. Some planned BMPs will be implemented when appropriate during the rainy season. Additional BMPs identified in this document will be implemented prior to October 15, 1999, or as designated in the BMPs in Tables A and B.

1.4 OTHER REGULATORY REQUIREMENTS

The construction and operation of the site is regulated by additional regulations and permits that serve the goals of this SWPPP. The permits include a Solid Waste Facilities Permit No. 49-AA-001, which is supported by a Report of Disposal Site Information; a Standardized

Composting Permit No. 49-AA-0260, which is supported by a Report of Compost Site Information; California Regional Water Quality Control Board North Coast Region (RWQCB) Order No. 93-83, General Waste Discharge Requirements for Municipal Solid Waste Landfills, which is supported by a Report of Waste Discharge; RWQCB Monitoring and Reporting Program No. 97-49; and BAAQMD Permit to Operate No. 2254. These permits and supporting documents include many of the BMPs described in this document.

1.5 DOCUMENT AVAILABILITY

A copy of the General Permit to Discharge Storm Water, Notice of Intent and the SWPPP is maintained at the facility and will be available at all times to operating personnel. Any request for a copy by the RWQCB, or other government agency is to be forwarded to the Operations Manager at the Sonoma County Transportation and Public Works Administrative Office.

Although this is an operations plan, meant for use by employees, it is a public document. Representatives of the California Regional Water Quality Board (RWQCB) who visit the facility on occasion are allowed direct access to the plan when on site. A copy of this plan is kept on the premises at the operations headquarters office for their review.

1.6 UPDATING THE SWPPP

The RWQCB can require changes to the plan. This plan is not required to be forwarded automatically to the RWQCB but only upon request. The plan is required to change whenever a change in activities occurs that may effect significantly the discharge of pollutants. The County may also change the plan if we determine that there are more economical BMPs to reduce pollution than the one's currently identified in the SWPPP. In addition, an erosion control plan is developed each summer to add facilities and identify improvements necessary to complete prior to the winter rains. The Annual Comprehensive Site Compliance Evaluation, described in Section 7 below, may require this document to be changed. The Integrated Solid Waste Operations Manager is responsible for determining if the SWPPP is to be changed and when.

SECTION 2: SITE MAPS

Figures 1 through 4 include the following information. Figure 1 shows the location of the Central Disposal Site within Sonoma County. Figure 2 indicates the facility boundaries. Figure 3 indicates the location of all structures and paved areas; areas of industrial activity, including storage areas for fuel, oil, recycling materials; receiving and processing areas; fueling areas; vehicle equipment storage and maintenance areas; material handling and processing areas for recycling, wood and yard waste, and composting; waste disposal areas; and the location of borrow sites, which are areas of

potential erosion. Figure 4 shows the drainage areas coinciding with industrial activity. The site is not impacted by run-on from other areas, because the industrial activity encompasses most of the top of the drainage area and any run-on is diverted into ditches to avoid the industrial activity. Figure 4 also delineates the direction of flow within the site, on-site surface water bodies, and storm water discharge points to a tributary to Stemple Creek. There are no authorized non-storm water discharges at this site. Figure 4 shows the existing storm water conveyance system and pollution control measures such as sediment ponds, ditch lining and other erosion control methods as well as new ones that will be constructed this year. Figure 4 also shows the vicinity of the Rock Extraction Project and its truck access road and truck routes.

SECTION 3: LIST OF SIGNIFICANT MATERIALS, HANDLING AND STORAGE

3.1 LEACHATE

Leachate is a liquid which has filtered through solid waste or has been generated by waste decomposition. Prior to accepting waste at the landfill, the bottom of the waste cells were graded to direct all liquids to the collection system. This system consists of a clay liner, trenches filled with drain rock and pipes to direct the liquid to two double-lined leachate holding ponds. The locations of the leachate ponds are shown on Figures 3 and 4. The total capacity of the two leachate ponds is 4.2 million gallons. The average leachate generated at the site varies considerably. Refer to the attached Leachate Management Plan for a discussion of leachate production volumes. A roof structure over the smaller leachate pond is under construction at this time and is expected to be completed during June 1999. A roof structure over the larger leachate pond is scheduled for construction by October 1999. Leachate may also seep from the sides of the landfill. This leachate is contained and delivered to the leachate ponds.

3.2 RECYCLABLES, PAINT, USED AUTOMOTIVE BATTERIES, AND USED AUTOMOTIVE OIL STORAGE

The recycling center provides an area suitable to accommodate containers such as, commercial bins or debris boxes to receive recyclable materials. Materials currently accepted include: glass (bottles, etc.) newspapers, cardboard, and metals such as aluminum, ferrous scrap, white goods (appliances) and used automotive batteries, paint, motor oil and tires. As feasible, plastics material will be added to the list of recycled materials. All recycled materials are stored in containers that are removed from the site within 90 days or when full. Paint is stored in an enclosed building. Used automotive batteries are stored in a Household Hazardous Waste locker and used automotive oil is stored in a double wall tank, each specifically designed for such storage and will provide secondary containment as required by 40 CFR 264.175 (3). Approximately 25,000 gallons of used automotive oil are stored on site throughout the year.

3.3 HOUSEHOLD HAZARDOUS WASTE

Hazardous wastes are not accepted at this facility. Household hazardous waste (HHW) that is discovered in customers loads is stored in a HHW locker that is located at the north end of the site as shown in Figure 3. The HHW locker has secondary containment to prevent any release of hazardous materials to the environment. Waste is removed no less than every ninety days by a licensed hauler who first packs the HHW in 55-gallon and 5-gallon containers. In a one year period approximately 128 55-gallon containers and 16 5-gallon containers filled with HHW are stored and removed from the lockers.

3.4 EQUIPMENT FUELING AND OIL

Diesel fuel is stored in five locations and oil is stored in eight locations as shown on Figure 3. The County uses approximately 160,000 gallons of diesel fuel and approximately 4,400 gallons of oil per year. The County's fuel is stored in tanks inside bermed containment areas each with a capacity of 1.5 times the tank's volume. The County receives approximately 3,000 gallons of fuel per week and 20 55-gallon drums of oil four times per year. On-site contractors use approximately 112,000 gallons of diesel fuel and 1,200 gallons of oil per year. The contractor that uses the fuel and oil stored at the western most location receives approximately 2,000 gallons of fuel and 200 gallons of oil per week for six months of the year. This fuel is stored in tanks inside a bermed containment area with a capacity of 1.5 times the tanks' volume. The fuel at the Chipping Area and the Composting Area is stored above ground in small tanks with secondary containment. The County's oil drums are stored in 55-gallon drums in a metal storage container. Absorbent socks are used around drums to catch leakage. The fuel and oil storage locations may change throughout the year. The rock quarry site does not include fuel, oil, or waste oil storage.

SECTION 4: DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

4.1 INDUSTRIAL PROCESSES

Industrial activities at this facility include municipal solid waste landfilling, material storage, vehicle storage, vehicle maintenance, recycling, wood debris chipping, yard debris chipping and composting, leachate filtration, and a rock quarry.

4.1.1 *Municipal Solid Waste Sanitary Landfilling*

This site handles and buries approximately 1300 tons per day over 359 days or 466,700 tons per year of municipal solid waste. The tipping apron is typically 400 feet long. The unloading area is defined by fences and barriers. Unloading by licensed haulers and the public is separated by fences and barriers. Customers are directed to the correct unloading area by the use of signs. During the dry months, traffic is directed by the use of signs to

unload as close as possible to the waste cell. Waste is moved from the unloading area to the daily waste cell with the grading equipment. Waste is spread into a cell that is about 50 to 100 feet wide and ranges from 100 to 175 feet long. The waste is covered daily with a minimum of six inches of soil or alternative cover at the end of the working day prior to closing. The soil, or alternative daily cover as approved by the Public Health Department, is placed to serve as a barrier to the emergence or attraction to the landfill of flies, rodents, or other vectors; the progress of fires within the landfill; the escape of odor; and excess infiltration of surface water.

Run-off control during the rainy season is accomplished by the design of the winter tipping area and the method of operation. This design directs surface water in the fill area such that it can be controlled. As a part of daily operations during times of surface water runoff, a berm is placed at the downgradient edge of the daily cell to collect any surface water that might run off the exposed garbage. At the end of the day after the cell is covered, the berm is either used for daily cover or moved to allow free drainage of the site.

4.1.2 *Wood and Yard Debris Chipping*

The site processes approximately 11,000 tons per year of wood debris and 49,000 tons of yard debris. Unloading and chipping occur in the Wood Chipping Area, located as shown in Figure 3. Clean loads of wood debris and tree stumps entering the disposal site are diverted, stockpiled, chipped or split, and removed from the site for firewood, wood chips, soil amendments, and building materials. Contaminated loads of yard debris are sorted and recyclables and refuse are removed. Clean yard debris is chipped and transferred to the Composting Area. Storage of unchipped wood and yard debris is limited to 72 hours. Storage of chipped work and yard debris is also limited to 72 hours. Wood chips and mulch not used in the composting operation or for cogeneration fuel are stored at the Wood Chipping Area. The Wood Chipping Area is paved with a cement treated base. All storm water from this area is directed into sedimentation control ponds prior to being discharged from the site.

4.1.3 *Yard Debris Composting*

This site processes approximately 49,000 tons of yard debris per year. Clean chipped yard debris is transferred from the chipping area and placed in windrows to compost. Water is added and the yard debris is turned in accordance with state regulations to produce compost. Once the compost is stabilized it is screened and sold. Portions of the Composting Area are paved with a cement treated base, as shown on Figure 3. All storm water from the Compost Area is directed into sedimentation control ponds prior to being discharged from the site.

4.1.4 *Equipment Fueling and Maintenance*

Diesel fuel is stored in above-ground storage tanks at five locations as shown on Figure 3. These locations may change throughout the year. The County's fuel and the Contractors'

fuel is stored in tanks inside a containment berm area with a capacity of 1.5 times the tanks' volume. The fueling of equipment and refilling of the fuel tanks occur at the fuel tanks. The fuel at the composting and chipping area (the other two locations) is stored above ground in small tanks with secondary containment. The fuel tanks are equipped with overflow protection.

Oil and waste oil are stored in 55-gallon drums and double wall storage tanks at eight locations as shown on Figure 3. The County's oil drums are stored in a metal storage container.

The equipment maintenance area for the County's equipment is the Mechanic Shed (fleet maintenance building) shown on Figure 3. It is a concrete pad that is raised to prevent storm water run-on and has a roof over it. This equipment maintenance facility is scheduled to be relocated to a site near the southeastern corner of the landfill, near Leachate Pond No. 2, at the location shown on Figure 3. Presently, oil barrels and the waste oil tank are stored on wood pallets on a 6-inch layer of crushed rock over a visqueen liner. Double-walled waste oil tanks are being purchased by the County and are scheduled for delivery within three to four months.

4.1.5 *Leachate Filtration Plant*

The County has installed a leachate filtration plant adjacent to Leachate Pond No. 2. The purpose of the filtration plant is to remove mercury from the leachate as necessary to meet the disposal requirements of the discharge permit issued by the Santa Rosa Wastewater Treatment Plant. On occasion in the past, the mercury level exceeded the allowable levels. The filtration plant was completed in mid-1998; however, it has not been in operation since that time because the mercury level in the leachate has been low enough to meet the Santa Rosa requirements without filtration. Details of the filtration plant are discussed in the attached Leachate Management Plan. Presently, within the filtration plant system, there is one 55-gallon drum each of two chemicals: sodium hypochlorite (12.5%) and sulphuric acid (35%). The drums are stored within double containment designed for this purpose. The plant also includes resin containers, activated charcoal filters, and leachate holding tanks. To control spills, the chemical storage drums, resin containers, leachate holding tanks, and the other components of the plant are all located on a concrete slab with perimeter containment and drains that would pass any spills directly into the adjacent leachate pond. A steel frame roof was constructed in May 1999 over the filtration plant to protect the plant from rain and reduce weathering of the various components of the system.

4.1.6 *Rock Quarry*

The County has a rock quarry (designated as the Rock Extraction Project) for removing approximately 700,000 cubic yards of rock from within the permitted footprint of the landfill as shown in Figure 5. The entire rock quarry area consists of 14.3 acres of which

about 10.6 acres are within the area permitted for refuse disposal at the Central Disposal Site. Scheduled to start in May 1999, the Rock Extraction Project is expected to last approximately three to four years. The Best Management Practices developed and implemented for the landfill and borrow areas will also generally apply to the rock quarry activities. Specific BMPs that apply to the rock quarry are discussed below in Section 6.

4.2 DUST AND PARTICULATE GENERATING ACTIVITIES

The industrial activities that generate dust are excavation of soil from borrow areas for cover, operations related to the rock quarry, including blasting, grading, and hauling, on-site traffic, and construction on-site. Water is sprayed from tanker trucks in areas where dust is created, such as at borrow sites, the rock quarry, and on access and haul roads, to control the dust. Detailed BMPs for dust control are presented in a separate document: Dust Control Plan, dated May 1999.

4.3 SIGNIFICANT SPILLS AND LEAKS

This site has had no significant spills or leaks in storm water discharges or non-storm water discharges since April 17, 1994, except as described below. In January of 1995, after a 100-year storm, the leachate overtopped the leachate pond. The total quantity of leachate that spilled into the storm water is unknown. Water quality samples from the storm water were collected and reported to the RWQCB. The water quality samples did not show any impact from this spill. The spill was stopped by hauling leachate to a waste water treatment facility. The steps that were taken to prevent a reoccurrence were to build a second leachate pond to increase the site's leachate storage capacity to 4.2 million gallons and to implement the Leachate Management Plan included in Exhibit 3.

In August 1998, a leachate seep was observed at the edge of Sedimentation Pond No. 3, which is located at the south end of the landfill near Hammel Road. The RWQCB was immediately notified and the County retained EBA Wastechnologies (EBA) to investigate the seep. Based on the findings of the investigation, EBA concluded that leachate was seeping around or through the landfill toe barrier into the sedimentation pond. Therefore, the County has removed the pond from operation and is rerouting storm runoff into other sedimentation ponds to the east and west, as shown on Figure 4. Before October 15, 1998, the subject pond was filled in with compacted soil. Water quality test results from a pond adjacent to the south end of the culvert under Hammel Road did not indicate any impact from this seep. A deep clay barrier constructed in approximately 1988 alongside and parallel to Hammel Road prevents subsurface contamination from leaving the site. During May and June 1999, EBA will install several new monitoring wells as part of an on-going leachate remediation feasibility study to determine the options available to contain and treat areas of leachate contamination.

4.4 NON-STORM WATER DISCHARGES

All non-storm water discharges have been eliminated at this facility.

4.5 SOIL EROSION

Areas where soil may erode include the borrow areas and slopes that have been newly constructed since the previous winter or are anticipated to be disturbed for landfill or rock quarry operations in the next several months before the next winter. These areas are shown in Figure 4.

SECTION 5: ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

The potential sources for pollutants to storm water are described below. This information is summarized in Table A.

The areas of activity that are potential sources of pollutants to the storm water are the municipal solid waste (MSW) landfill, the soil borrow areas, the leachate storage ponds, the wood and yard debris chipping area, the compost area, the equipment fueling areas, equipment maintenance areas, the recycling area, the household hazardous waste storage (HHW) area, the leachate filtration plant, the rock quarry, and access and haul roads associated with site activities.

The pollutants that are potentially possible to be present in storm water are leachate, litter, sediment, organic particles, diesel fuel, waste oil, battery acid, paint, automotive oil and various hazardous wastes associated with the solid waste landfill. Potential pollutants associated with the leachate filtration plant includes leachate, resin, sodium hypochlorite, and sulfuric acid. Potential pollutants associated with the rock quarry operations include dry blasting agents (ammonium nitrate, aluminum powder, fuel oil) and chemical constituents of water gel product explosives, explosive boosters, and detonators. Material Safety Data Sheets for the materials associated with the leachate filtration plant and the rock quarry, as well as other materials present on site, are on file at the Central Disposal Site operations office.

As a municipal solid waste landfill, the Central Disposal Site is a potential source for leachate, litter, and sediment. The soil borrow areas are a potential source for sediment. The leachate storage ponds are a potential source for leachate. The wood and yard debris chipping area is a potential source for leachate and litter. The compost area is a potential source for leachate and organic particles. The equipment fueling areas are a potential source for diesel fuel. The equipment maintenance areas are a potential source for waste oil. The HHW storage area is a potential source for various hazardous wastes. The leachate filter plant is a potential source for various hazardous materials. The rock quarry is a potential source for dust, sediment, and diesel fuel from on-site mobile re-fueling.

SECTION 6: STORM WATER BEST MANAGEMENT PRACTICES

The BMPs for all site operations are summarized in Table A, Assessment of Potential Pollution Sources and Corresponding Best Management Practices.

6.1 EXISTING BEST MANAGEMENT PRACTICES

The following best management practices (BMPs) are in place at the Central Disposal Site.

The following BMPs are to control pollutants from leachate generated by refuse or wood and yard debris. These will prevent leachate from being generated and entering the storm water discharge.

- Application of daily and intermediate cover over waste cells;
- Limit size of active waste cells;
- Compact refuse and cover;
- Check grades at disposal site, chipping area and compost area before each rainy season and regrade as needed to prevent run-on of storm water;
- Build a daily berm at down gradient edge of the daily refuse cell to collect any surface water that might run off exposed garbage;
- After a refuse cell is covered, remove berm to allow free drainage of the site;
- Operate leachate collection system to remove leachate from landfill;
- Inspect site for leachate seeps on a daily basis;
- Control leachate seeps by collecting leachate and draining it to leachate storage ponds;
- Inspect level of freeboard (minimum allowed is 2 feet) at both leachate ponds daily;
- Empty both leachate ponds during the dry season of each year;
- Store unchipped wood and yard debris no more than 72 hours prior to chipping; and
- Store chipped wood and yard debris no more than 72 hours prior to removal from site.

The following BMPs are to control pollutants from litter from entering the storm water discharge.

- Erect and maintain litter fences at key locations around the site;
- Pick up litter from fences and site on a daily basis, or as needed, with a litter crew and vacuum; and
- Inspect and clean drainage inlets during and after storm events of 1 inch of rain or more, or more often if problem areas are identified.

The following BMPs are to control pollutants from sediment from entering the storm water discharge.

- Maintain drainage structures such as ditches, down drains, sediment control ponds,

energy dispersion structures as shown in Figure 4, Erosion Control Plan for Fall 1999 (Preliminary), and described in Exhibit 2;
- Remove sediment from sedimentation control ponds and ditches on an annual basis or more frequently if needed;
- Place seed and straw on all bare slopes except the winter borrow area;
- Repair any eroded areas;
- Place straw bales and other erosion prevention measures as shown in Figure 4;
- Install and maintain trash guards around drainage inlets; and
- Inspect storm water drainage facilities for erosion or sediment build during and after storm events of 1 inch of rain or more.

The following-described BMPs are implemented to control pollutants from diesel fuel from entering the storm water discharge.

- Use spill and overflow protection such as containment berms or secondary containment;
- Inspect tanks and lines each time they are used to prevent tank and line leaks;
- Store fuel tank within lined containment berm;
- Inspect fueling area monthly and regrade as needed to prevent run-on; and
- Train employees on proper fueling, cleanup, and spill response techniques.

The following BMPs are implemented to control pollutants from waste oil, battery acid, paint, used auto oil and hazardous waste from entering the storm water discharge.

- Drain oil and other fluids into approved receptacles;
- Store waste oil and other fluids in proper containers for removal from the site;
- Use dry cleanup methods rather than hosing down area;
- Store batteries and HHW in DOT approved lockers with secondary containment;
- Store paint in a enclosed building;
- Store waste oil in containers with secondary containment;
- Train employees on proper cleanup and spill response techniques;
- Place absorbent socks around oil containers to catch spills; and
- Cover equipment maintenance area.

The following BMPs are to control pollutants from the leachate ponds or leachate collection systems from entering the storm water discharge.

- Construct and maintain drainage structures such as ditches, down drains, sediment control pond, and energy dispersion structures as shown in Figure 4, Erosion Control Plan 1999 (Preliminary) and described in Exhibit 2.
- Implement Leachate Management Plan (Revised May 1999) as presented in Exhibit 3.
- Implement Leachate Seep Control Plan (Revised May 1999), as described in Exhibit 4.
- Construct roof over Leachate Pond No. 1 (LP-1) by the end of June 1999 to keep rain out

(this is well under construction as of May 1999);
- Construct roof over Leachate Pond No. 2 (LP-1) by the end of November 1999 to keep rain out;
- Discharge untreated leachate from landfill only to LP-1, except when the leachate requires no treatment or in an emergency;
- Clean Leachate Pond No. 2 (LP-2) before the rainy season and discharge any subsequent clean rainwater from pond into creek, subject to acceptable water quality testing results, or dispose of the rainwater in an approved manner on-site;
- As directed by the Operations Manager, haul stored leachate, treated for mercury content if necessary, to waste water treatment plant so that the leachate ponds always maintain a minimum freeboard of 2 feet.
- When LP-1 reaches 80% of permitted capacity, stop discharging rainwater from LP-2, treat leachate from LP-1 as warranted by pond water test results, and discharge treated water, as needed, into LP-2; and
- When LP-2 reaches 90% of permitted capacity, or sooner if deemed necessary by the Operations Manager, haul stored leachate to waste water treatment plant so that the leachate ponds always maintain a minimum freeboard of 2 feet.

The following-described BMPs are implemented to control pollutants from the leachate filtration plant from entering the storm water discharge.

- Train employees on proper operation and maintenance of leachate filtration equipment;
- Store filtration plant chemicals in proper containers;
- Store used waste materials and fluids in proper containers for removal from the site;
- Keep drain pipes clean and unobstructed to permit direct flow of spills to the leachate pond;
- Store excess plant chemicals in DOT approved lockers with secondary containment;
- Train employees on proper cleanup and spill response techniques;
- Maintain equipment control systems; and
- Keep area clean.

The following BMPs have been implemented to prevent organic materials from the compost area from entering the storm water discharge. These BMPs are described in more detail in the attached Table B.

- Direct all compost storm water to the compost area sedimentation pond;
- Inspect compost pad prior to winter and repair any areas that will lead to ponding of water;
- Annually drain and clean sediment out of compost sedimentation pond;
- Prior to the first major rain storm event (more than 2 inches in 24 hours) the scarab turner will be modified so that the top will be rounded and more likely to shed rain rather than absorb it;

- By the end of October, drop the moisture content of the yard waste brought up to the compost pad;
- Prior to the end of November, remove all compost that has been through the pathogen reduction period from compost windrows and put it into static piles;
- Limit turning of the windrows to the minimum necessary to meet pathogen reduction standards two days prior to and following major storm events to limit the amount of water entering windrows;
- Prior to the end of November, clean up organic debris in the isles between the compost windrows and use the sweeper on the isles on the concrete pads; and
- Perform field tests for ammonia within the compost area after major storms to determine if certain windrows or conditions are contributing more or less to any problem.
- Review effectiveness of covering more acreage of the compost operations area with cement-treated base rock to reduce infiltration and improve runoff conditions and construct new similar paved areas, if warranted, before October 1, 1999.

6.2 NEW BEST MANAGEMENT PRACTICES

Note that separate documents designated as the Spill Prevention, Control and Countermeasure Plan and Contingency Plan, dated May 1999, have been prepared for relevant operations at the Central Disposal Site, including the Rock Extraction Project, to identify fueling procedures, fuel and oil storage requirements, and contingency measures to contain and clean up accidental spills.

The following new BMPs will be implemented at the Central Disposal Site for the Rock Extraction Project to prevent contaminants from entering the storm water discharge:

- Construct and maintain drainage structures for the quarry such as ditches, sediment traps, and energy dispersion structures, as warranted, as shown in Figure 4, Erosion Control Plan 1999 (Preliminary) and described in Exhibit 2.
- Check perimeter grades and regrade as needed to control run-on of storm water.
- Disturbance to adjacent soil areas will be kept to a minimum.
- Seed and straw will be applied to disturbed areas likely to be susceptible to erosion.
- Perimeter hay bales or silt fences will be applied as needed.
- Prevent mining within 25 feet of the edge of any adjacent refuse areas.
- Empty sediment traps as needed to maintain storage capacity.

SECTION 7: ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The County will conduct one comprehensive site compliance evaluation in each reporting period (July 1 - June 30). Evaluations will be conducted within 8 to 16 months of each other. The SWPPP will be revised, as appropriate, and the revisions implemented within ninety days of the evaluation. The evaluation will include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results;
b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system;
c. A review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, will be included; and
d. An evaluation report that includes, identification of personnel performing the evaluation; the date(s) of the evaluation; necessary SWPPP revisions; schedule for implementing SWPPP revisions; any incidents of non-compliance and the corrective actions taken and a certification that the facility operator is in compliance with the General Permit. If this certification cannot be provided, the report will explain why the facility operator is not in compliance with the General Permit. The evaluation report will be submitted as part of the annual report, retained for at least five years and signed and certified in accordance with Standard Provisions 9 and 10 of Section C of the General Permit.

SECTION 8: MONITORING PROGRAM AND REPORTING REQUIREMENTS

8.1 NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS

County staff will visually observe all drainage areas within the facilities for the presence of unauthorized non-storm water discharges. These observations will occur quarterly, during daylight hours, on days with no storm water discharges and during scheduled facility operating hours. Quarterly observations will be conducted in each of the following periods: January through March, April through June, July through September and October through December. The quarterly visual observations will be conducted within six to eighteen weeks of each other. The visual observations will document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. The County will maintain records of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

8.2 STORM-WATER DISCHARGE VISUAL OBSERVATION

County staff will observe storm water discharges from one storm event per month during the wet season (October 1 through May 30). These visual observations will occur during the first hour of discharge at all discharge locations. Visual observations will only be made of storm water discharges that occur during daylight hours that are proceeded by at least three working days without storm water discharges and occur during scheduled facility operating hours. The visual observations will document the presence of any floating and suspended material, oil and grease, discoloration, turbidity, odors and the source of any pollutants. The

County will maintain records of the visual observation dates, locations observed, observations and response taken to reduce or prevent pollutants in storm water discharges.

8.3 STORM WATER SAMPLING

The County will collect two storm samples from each sample location. The samples will be collected during the first hour of discharge, one from the first storm event of the wet season and one from at least one other storm event in the wet season. Storm water will be sampled from all discharge locations. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is released. If the County is unable to collect samples from the first storm event of the wet season, the County will still collect samples from two other storm events of the wet season and shall explain in the annual report why the first storm event was not sampled. Samples will only be collected from storm discharges that occur during scheduled facility operating hours and that are proceeded by at least three working days without storm water discharge.

Each sample collected from SW-1 and SW-6 will be analyzed for total suspended solids, pH, specific conductance, iron (total) and total organic carbon. Storm water sampling from the compost area will be collected and analyzed in accordance with California Regional Water Quality Control Board North Coast Region (RWQCB) Monitoring and Reporting Program No. 97-49 (See Exhibit 4). In addition, storm water sampling will be performed in accordance with the Interim Sampling Plan (ISP) dated February 27, 1998 (See Exhibit 5) provided by the County consultant EBA Wastechnologies, until such time as the ISP is modified or suspended with the concurrence of the RWQCB.

8.4 SAMPLE LOCATIONS

The site map, Figure 3, shows the location of where surface water samples are taken. Sample location SW-1 is an outlet from the culvert under Hammel Road that discharges to an unnamed tributary to Stemple Creek. It samples all the water from Sedimentation Ponds Nos. 1 and 2 (No. 3 has been taken out of use) covering most of the central and western sides of the site. SW-6 is in an unnamed tributary to Stemple Creek below the discharge point from the site. It samples storm water from Sedimentation Ponds Nos. 4, 8, 5 and 6 covering all of the eastern side and some portions of the central and north areas of the site. Storm water sampling from the compost area (including SW-3) will be collected and analyzed in accordance with RWQCB Monitoring and Reporting Program No. 97-49 and the ISP.

8.5 MONITORING METHODS

All sampling and sample preservation will be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment will be calibrated and maintained

in accordance with manufactures' specifications to ensure accurate measurements. All laboratory analyses will be conducted according to test procedures under Section 40 CFR Part 136, unless other rest procedures have been specified in the general permit or by the RWQCB. All metals will be reported as total metals. All analysis will be conducted at a laboratory certified for such analyses by the State Department of Health Services.

SECTION 9: RECORDS

Records of all storm water monitoring information and copies of all reports required by this general permit will be retained for a period of at least five years from the date of the sample, observation, measurement, or report. Records are maintained at the Department of Transportation and Public Works. These records will include:

a. The date, place, and time of site inspection, sampling, visual observation, and/or measurements;
b. The individual(s) who performed the site inspections, sampling, visual observations, and/or measurements;
c. The date and approximate time of analyses;
d. The individual(s) or certified lab that performed the analyses;
e. Analytical results, method detection limits, and the analytical techniques or methods used;
f. Quality assurance/quality control records and results;
g. Non-storm water discharge inspections and visual observations and storm water discharge visual observations records;
h. Visual observation and sample collection exception records;
I. All calibration and maintenance records of instruments used on site, all original strip chart recordings for continuous monitoring instrumentation; and
j. The records of any corrective actions and follow-up activities that resulted from the visual observations.

SECTION 10: ANNUAL REPORT

An Annual Report will be submitted to the Executive Officer of the Regional Water Quality Control Board (RWQCB) by the 1st of July, each year. The Annual Report will include a summary of visual observations, sampling and analysis results, the Annual Comprehensive Site Compliance Evaluation Report, the records described above in Section 8, Monitoring Program and Reporting Requirements, and an explanation of why a facility did not implement any activities required by the General Permit. The method detection limit of each analytical parameter will be included. Analytical results that are less than the method detection limit shall be reported as less than the method detection limit. The Annual Report will be signed and certified in accordance with Standard Provisions 9 and 10 of Section C of the General Permit. The Annual Report will be prepared and submitted using the annual report forms provided by the State Water Board or Regional Water Board or will be submitted in a form that contains equivalent information.

TABLES

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Municipal Solid Waste Landfill	Disposal of waste	Rainfall running off exposed garbage	Leachate	- Application of daily & intermediate cover over waste cells - Limit size of active waste cells - Compact refuse & cover - Check site grades and regrade as needed to prevent run-on of storm water - Build a daily berm at down gradient edge of the daily cell to collect any surface water that might run off exposed garbage - After the cell is covered, remove berm to allow free drainage of the site
		Leachate seeps from landfill	Leachate	- Apply adequate compacted cover - Operate leachate collection system to remove leachate from landfill - Inspect site for leachate seeps - Control leachate seeps by collecting leachate and transferring it to leachate storage ponds
		Refuse blowing off disposal area	Litter	- Application of daily cover - Erect and maintain litter fences at key locations around the site - Build portable litter barriers to move near to active refuse cell - Pick up litter from fences and site on a daily basis, or as needed, with a litter crew and vacuum - Inspect and clean drainage inlets during and after storm events of 1 inch of rain or more, or more often if problem areas are identified.

Note: Refer to Spill Prevention, Control and Countermeasure Plan and Contingency Plan for more information.

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Municipal Solid Waste Landfill	Placement of cover soil	Erosion of soil off of landfill	Sediment	- Construct and maintain drainage structures such as ditches, down drains, sediment control ponds, energy dispersion structures as shown in Figure 4, Erosion Control Plan 1999 (Preliminary) and described in Exhibit 2 - Remove sediment from sediment control ponds and ditches on an annual basis or more frequently if needed - Place seed and straw on all bare slopes except the winter borrow area - Repair any eroded areas - Place straw bales and wattles as shown on Figure 4 - Install and maintain trash guards around drainage inlets - Inspect storm water drainage facilities for erosion or sediment buildup during and after storm events of 1 inch of rain or more in 24 hours
Borrow Areas	Excavation of soil	Erosion of soil off of site	Sediment	
Wood & Yard Debris Chipping Area	Chipping & storage of wood & yard debris	Leachate running off site	Leachate	- Grade site to prevent storm water run-on - Store unchipped wood and yard debris no more than 72 hours prior to chipping - Store chipped wood & yard debris no more than 72 hours prior to removal from site

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Leachate Storage Ponds	Leachate Storage	Leachate overtopping ponds into storm drains	Leachate	- Empty both ponds during the dry season of each year - Inspect level of freeboard (minimum allowed is 2 feet) at both ponds daily - Discharge untreated leachate from landfill only to Leachate Pond No. 1 (LP-1) - Clean Leachate Pond No. 2 (LP-2) before the rainy season and discharge any subsequent clean rainwater from LP-2 into the creek, subject to acceptable water quality testing results, or dispose of the rainwater in an approved manner - When LP-1 reaches 80% of permitted capacity, stop discharging rainwater from LP-2, treat leachate from LP-1 as warranted by pond water test results, and discharge treated water, as needed, into LP-2 - When LP-2 reaches 90% of permitted capacity, haul stored leachate to waste water treatment plant as needed to maintain the minimum freeboard of 2 feet
Equipment Maintenance Areas	Equipment Maintenance	Oil/fluid runoff from maintenance areas	Waste oil/ other fluids	- Drain oil and other fluids into approved receptacles - Store waste oil and other fluids in proper containers for removal from site - Use dry cleanup methods rather than hosing down area - Train employees on proper cleanup & spill response techniques - Maintain cover over equipment maintenance area

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Compost Area **Note: Refer to Table B for more details and BMPs.**	Yard Debris	Leachate and yard waste debris running off site	Leachate and organic particles	- Direct all compost storm water to the compost area sedimentation pond - Inspect compost pad prior to winter and regrade, as needed, to prevent ponding of water - Annually drain and clean sediment out of compost sedimentation pond - Prior to the first major rain storm event (more than 2 inches in 24 hours) the scarab turner will be modified so that the top will be rounded and more likely to shed rain - Utilize an aeration system, if needed, to assist in the removal of un-ionized ammonia in the storm water in the new pond. - By the end of October, drop the moisture content of the yard waste brought up to the compost pad - Limit turning of the windrows to the minimum necessary to meet pathogen reduction standards two days prior to and following major storm events to limit the amount of water entering windrows - Prior to the end of November, remove all compost that has been through the pathogen reduction period from compost windrows and put it into static piles - Prior to the end of November, clean up organic debris in the isles between the compost windrows and use the sweeper on the isles on the concrete pads - Install a filtration system to remove organics from runoff - Perform field tests for ammonia within the compost area after major storms to determine if certain windrows or

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Equipment Fueling	Fueling	Spills & leaks during delivery	Diesel fuel	- Use spill and overflow protection such as containment berms or secondary containment - Inspect tanks and lines each time they are used to prevent tank and line leaks - Store fuel tanks within containment berms - Inspect fueling area monthly and regrade as needed to prevent run-on - Inspect fueling area monthly and regrade as needed to prevent run-on - Train employees on proper fueling, cleanup, and spill response techniques
		Spills caused by topping off fuel tanks		
		Leaking storage tanks		
Recycling Area	Battery Storage	Contaminants from batteries runoff into storm drains	Battery acid	- Store batteries and HHW in DOT approved lockers with secondary containment - Store paint in an enclosed building - Store waste oil in containers with secondary containment - Place absorbent socks around oil containers to catch spills - Use dry cleanup methods rather than hosing down area - Train employees on proper cleanup & spill response techniques - Construct roofs over waste oil containers
	Paint Storage	Paint runoff into storm drains	Paint	
	Used auto oil storage	Oil runoff into storm drains	Oil	
Household Hazardous Waste (HHW) Storage	HHW Lockers	Hazardous waste runoff into storm drains	Hazardous waste	

TABLE A

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES CENTRAL DISPOSAL SITE 1999/2000

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Rock Extraction Project	Grading, blasting, loading	Erosion of soil off of rock quarry site	Sediment	- Construct and maintain drainage structures such as ditches, sediment traps, as shown in the Erosion Control Plan - Disturbance to adjacent soil areas will be kept to a minimum - Seed and straw will be applied to disturbed areas likely to be susceptible to erosion - Perimeter hay bales or silt fences will be applied as needed - Check site perimeter grades and regrade as needed to control run-on of storm water - Empty sediment traps as needed to maintain capacity - Prevent mining within 25 feet of the edge of refuse
	Explosive delivery and placement	Spills during delivery or placement	Explosive constituent chemicals	- No explosive storage will be on-site for the rock quarry - Train employees on proper handling, cleanup, and spill response techniques
	Equipment Maintenance	Oil/fluid runoff from maintenance areas	Waste oil/ other fluids	- No waste oil/fluid storage tanks will be on-site for the rock quarry - Use dry cleanup methods rather than hosing down area - Train employees on proper cleanup & spill response techniques
	Fueling (Drill rig)	Spills & leaks during delivery	Diesel fuel	- No fuel storage tanks will be on-site for the rock quarry - Use spill and overflow protection such as containment berms or secondary containment - Inspect mobile tanks and lines each time they are used to detect and prevent leaks - Train employees on proper fueling, cleanup, and spill response techniques
		Spills caused by topping off fuel tank		

SONOMA COUNTY

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
INTEGRATED WASTE DIVISION

TABLE B

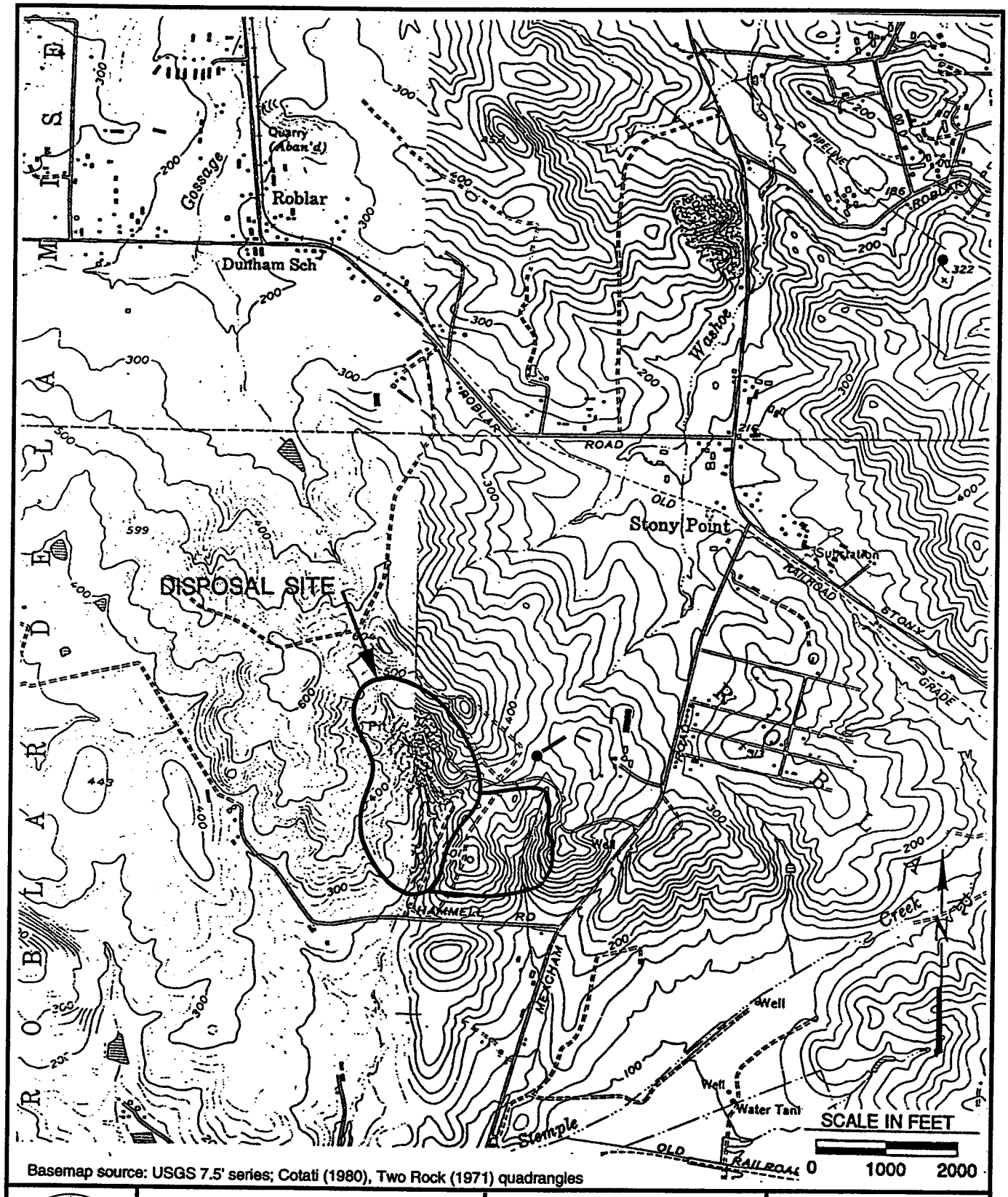
STORM WATER BEST MANAGEMENT PRACTICES
CENTRAL COMPOST SITE FOR 1999/2000

Revised May 1999

Sonoma County and its contract operator, Sonoma Compost, will implement the following Best Management Practices (BMP) at the Central Compost Site during the winter of 1999/2000. The purpose of these is to minimize discharge of constituents of concern from the compost operation to the storm water.

BMP	Description	Who	Deadline
Grading & Drainage Improve-ments	Direct all compost storm water to a sedimentation pond. Regrade the site, if necessary, to remove low areas and puddles. Inspect and maintain all culverts draining the compost area into the sedimentation pond.	County	October 15
Sediment Ponds	Drain and clean sediment out of Sedimentation Pond No. 4, which has a capacity of 875,000 gallons. Also clean out Sedimentation Pond No. 8 at the outlet from Sed. Pond No. 4, if necessary, to maintain supplemental storage (approximately 250,000 gallons) and detention time.	County	October 1
Aeration System	An aeration system is available and will be utilized, if needed, to assist in the elimination of un-ionized ammonia in the storm water in Sediment Pond No.8.	County	All Winter
Concrete Operating Area Expansion	The compost and woodchipping areas have approximately 7 acres of concrete treated base surfacing for superior wet weather operating conditions and easier cleaning. The County and Sonoma Compost are reviewing the feasibility of constructing similar surfacing over more area. If feasible, construct paved area before October 1, 1999.	County and Sonoma Compost	October 1
Rounded Windrows	Prior to the first major rain the scarab turner will be modified so that the tops of the windrows will be rounded and more likely to shed rain rather than absorb it.	Sonoma Compost	Prior to first major storm
Lower Moisture Content of Yard Waste	Direct Empire Waste Management to drop the moisture content of the yard waste they bring up to the compost pad. This will allow the compost windrows to absorb more rain water before producing leachate.	Sonoma Compost and Empire Waste Management	End of October
Reduce active windrow piles	Upon LEA approval and as space allows, remove all compost that has been through the pathogen reduction period from compost windrows and put them into static piles. Sell as much material as possible to minimize inventory. Negotiate the sale or transfer of ground yard debris off-site to reduce the volume of organic material stored on-site.	Sonoma Compost	October and November
Filter Organics in runoff	A filtration system will be installed to remove organic matter from the runoff. The design is being developed by a consultant and will be implemented as soon as possible.	Sonoma Compost	October and November
Limit turning around storm events	Limit turning of the windrows to the minimum necessary to meet pathogen reduction standards two days prior to and following major storm events to limit the amount of water entering windrows.	Sonoma Compost	All Winter
Row Cleanup	Sonoma Compost will clean up organic debris in the isles between the compost windrows. The County will assist in this by using the sweeper on the isles on the concreted pads.	Sonoma Compost and County	November 1
Monitoring	Sonoma Compost to field sample for ammonia within the compost area after major storms to determine if certain windrows or conditions are contributing to any problem. County to perform monitoring and sampling program at selected compliance points as agreed with RWQCB.	Sonoma Compost and County	All Winter

FIGURES



Basemap source: USGS 7.5' series; Cotati (1980), Two Rock (1971) quadrangles

	Sonoma County Department of Transportation and Public Works Integrated Waste Division	SITE LOCATION MAP CENTRAL DISPOSAL SITE 500 MECHAM ROAD PETALUMA, CA	FIGURE 1 May 1999

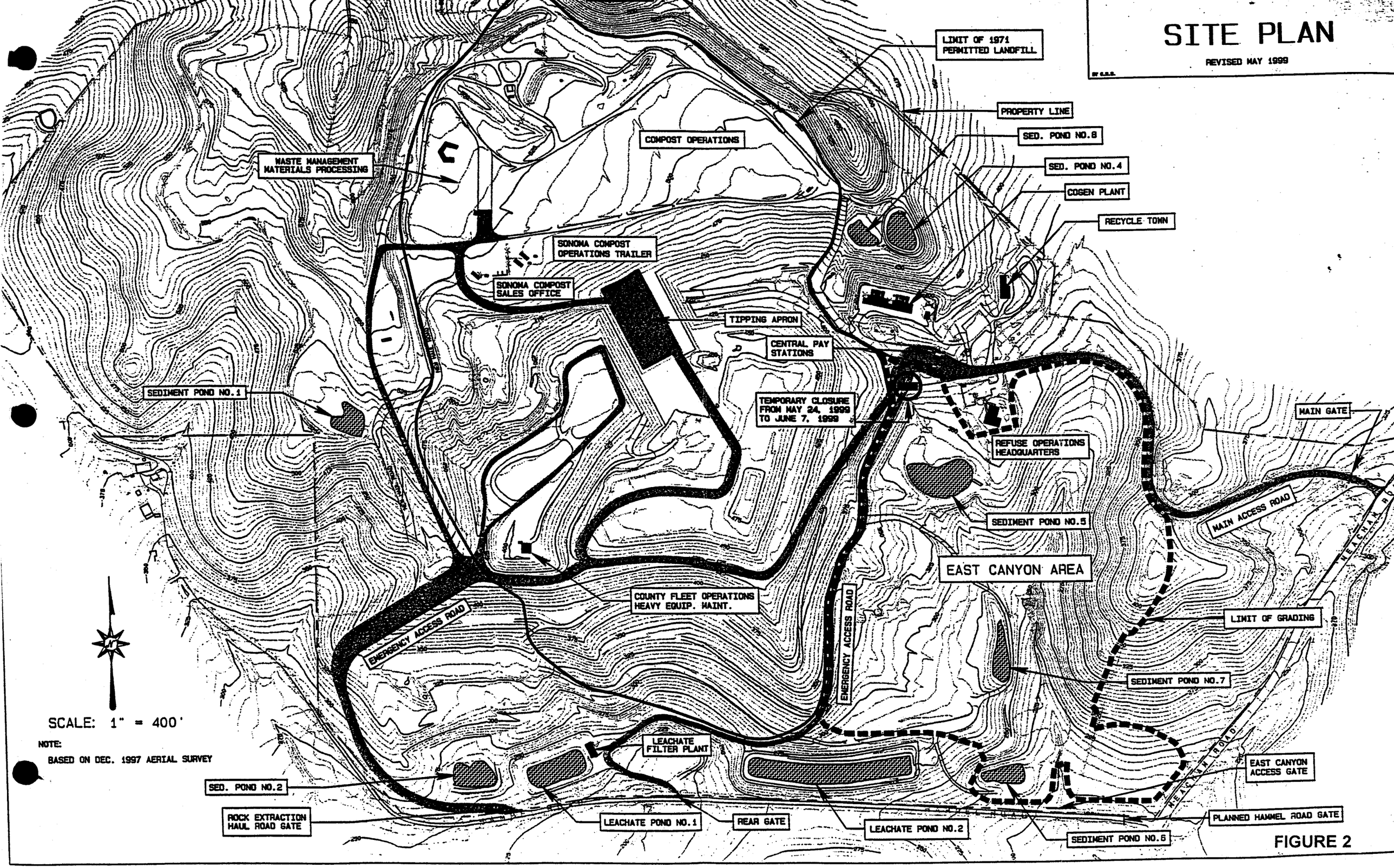

SITE PLAN
REVISED MAY 1999
LIMIT OF 1971 PERMITTED LANDFILL
PROPERTY LINE
SED. POND NO.8
SED. POND NO.4
COGEN PLANT
RECYCLE TOWN
COMPOST OPERATIONS
WASTE MANAGEMENT MATERIALS PROCESSING
SONOMA COMPOST OPERATIONS TRAILER
SONOMA COMPOST SALES OFFICE
TIPPING APRON
CENTRAL PAY STATIONS
TEMPORARY CLOSURE FROM MAY 24, 1999 TO JUNE 7, 1999
SEDIMENT POND NO.1
MAIN GATE
REFUSE OPERATIONS HEADQUARTERS
MAIN ACCESS ROAD
SEDIMENT POND NO.5
EAST CANYON AREA
COUNTY FLEET OPERATIONS HEAVY EQUIP. MAINT.
EMERGENCY ACCESS ROAD
EMERGENCY ACCESS ROAD
LIMIT OF GRADING
SEDIMENT POND NO.7
SCALE: 1" = 400'
NOTE:
BASED ON DEC. 1997 AERIAL SURVEY
LEACHATE FILTER PLANT
EAST CANYON ACCESS GATE
SED. POND NO.2
ROCK EXTRACTION HAUL ROAD GATE
LEACHATE POND NO.1
REAR GATE
LEACHATE POND NO.2
SEDIMENT POND NO.6
PLANNED HAMMEL ROAD GATE

FIGURE 2

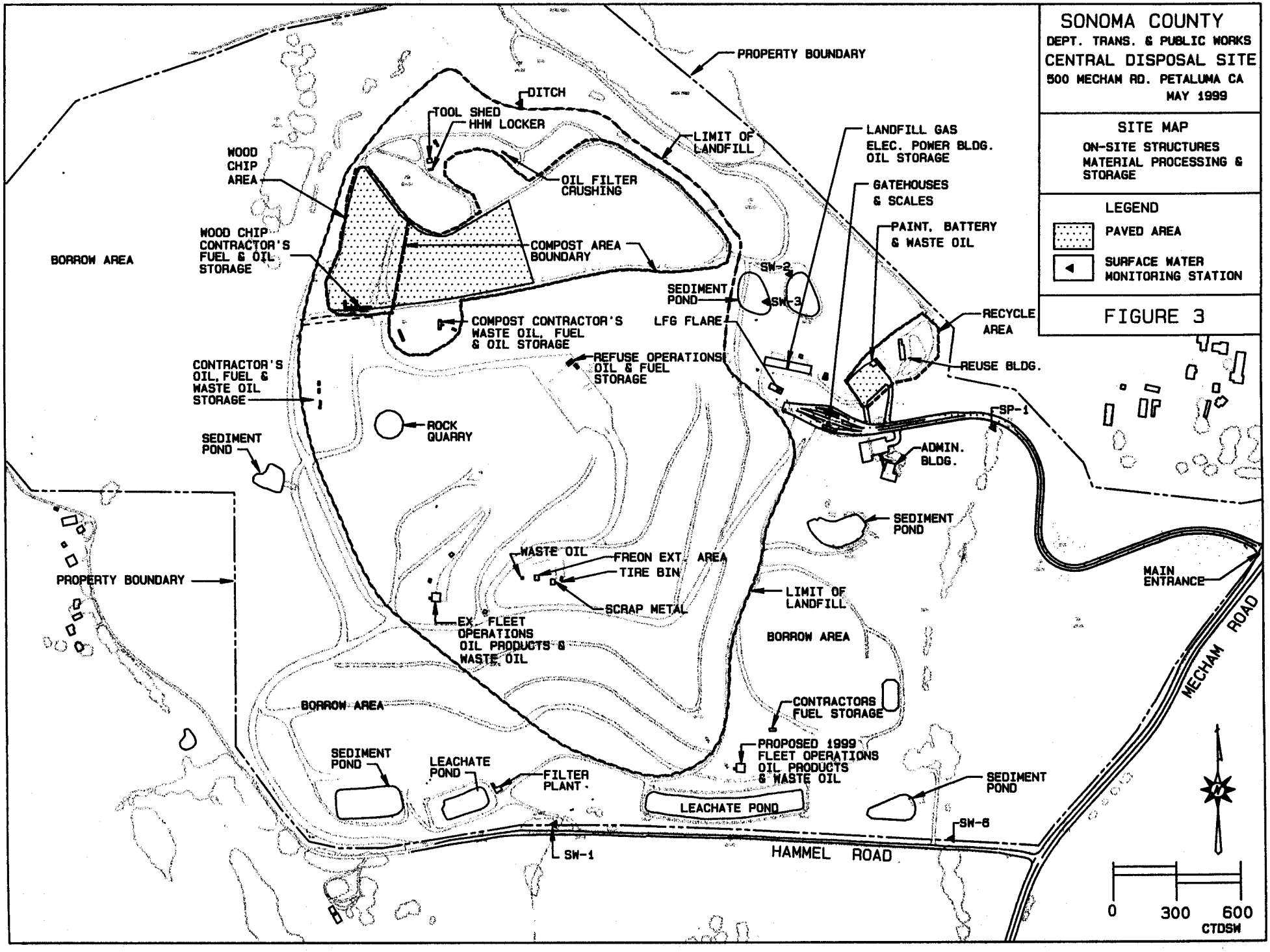

SONOMA COUNTY
DEPT. TRANS. & PUBLIC WORKS
CENTRAL DISPOSAL SITE
500 MECHAM RD. PETALUMA CA
MAY 1999
SITE MAP
ON-SITE STRUCTURES
MATERIAL PROCESSING & STORAGE
LEGEND
PAVED AREA
SURFACE WATER MONITORING STATION
FIGURE 3
PROPERTY BOUNDARY
DITCH
TOOL SHED
HHW LOCKER
LIMIT OF LANDFILL
LANDFILL GAS
ELEC. POWER BLDG.
OIL STORAGE
WOOD CHIP AREA
OIL FILTER CRUSHING
GATEHOUSES & SCALES
PAINT, BATTERY & WASTE OIL
WOOD CHIP CONTRACTOR'S FUEL & OIL STORAGE
COMPOST AREA BOUNDARY
BORROW AREA
SW-2
SEDIMENT POND
SW-3
RECYCLE AREA
COMPOST CONTRACTOR'S WASTE OIL, FUEL & OIL STORAGE
LFG FLARE
REFUSE OPERATIONS OIL & FUEL STORAGE
REUSE BLDG.
CONTRACTOR'S OIL, FUEL & WASTE OIL STORAGE
SP-1
ROCK QUARRY
SEDIMENT POND
ADMIN. BLDG.
SEDIMENT POND
WASTE OIL
FREON EXT. AREA
TIRE BIN
PROPERTY BOUNDARY
MAIN ENTRANCE
LIMIT OF LANDFILL
SCRAP METAL
EX. FLEET OPERATIONS OIL PRODUCTS & WASTE OIL
BORROW AREA
MECHAM ROAD
BORROW AREA
CONTRACTORS FUEL STORAGE
PROPOSED 1999 FLEET OPERATIONS OIL PRODUCTS & WASTE OIL
SEDIMENT POND
LEACHATE POND
FILTER PLANT
SEDIMENT POND
LEACHATE POND
SW-6
SW-1
HAMMEL ROAD
0
300
600
CTDSW

EXHIBIT 1

NOTICE OF INTENT

For Existing Facility Operators

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 97-03-DWQ)

This Notice of Intent (NOI) is being sent to all facility operators that were enrolled under the prior Industrial Storm Water General Permit that has now expired. A new General Permit has been adopted to replace the expired one. To enroll under the new General Permit, review this NOI (and make any necessary corrections), sign the CERTIFICATION on the reverse side, and return this original NOI within 45 days of receipt to: STORM WATER NOI PROCESSING UNIT, STATE WATER RESOURCES CONTROL BOARD, PO BOX 1977, SACRAMENTO, CA 95812-1977

FACILITY OPERATOR INFORMATION:

WDID: 1 24S006101

NAME: SONOMA COUNTY

STREET: 575 ADMINISTRATION DR, RM 117A

CITY, STATE, ZIP: SANTA ROSA CA 95403

CONTACT & PHONE
RICHARD DOBLE
(707) 792-0547

FACILITY LOCATION:

County: Sonoma

NAME: CENTRAL LANDFILL

STREET: 500 MEACHAM ROAD

CITY, STATE, ZIP: PETALUMA CA 94972

CONTACT & PHONE
RICHARD DOBLE
(707) 792-0547

FACILITY MAILING ADDRESS: (IF DIFFERENT THAN FACILITY LOCATION)

STREET OR POST OFFICE BOX: 500 MECHAM ROAD

CITY, STATE, ZIP: PETALUMA, CA 94952

ADDRESS FOR CORRESPONDENCE - SEND TO: (CHECK ONE)

[ ] Facility Operator Address [ ] Facility Mailing Address [XX] Both

BILLING ADDRESS INFORMATION - SEND TO: (CHECK ONE)

[X] Facility Operator Address [ ] Facility Mailing Address [ ] Other (enter below)

NAME: SONOMA COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS INTEGRATED WASTE DIVISION

STREET: 500 MECHAM ROAD

CITY, STATE, ZIP: PETALUMA, CA 94952

CONTACT PERSON: RICH DOBLE PHONE: (707) 792-0547

SIC(S) OF REGULATED ACTIVITY:

5093 Scrap & Waste Materials

4953 Refuse Systems

EXHIBIT 1

(CERTIFICATION continued on the reverse side)

CERTIFICATION: **WDID:** 1 24S006101

"I certify under penaty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development of and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: EDWARD J. WALKER

Signature: E J Walker Date: 5/19/97

Title: DIRECTOR OF TRANSPORTATION AND PUBLIC WORKS

RICHARD DOBLE
SONOMA COUNTY
575 ADMINISTRATION DR, RM 117A
SANTA ROSA, CA 95403

For State Water Board Use

3. 7429 4. ____ ROCK QUARRY

Industrial activities at facility (Check all that apply)

1. ☐ Manufacturing
2. ☒ Vehicle Maintenance
3. ☐ Hazardous Waste Treatment, Storage, or Disposal Facility (RCRA Subtitle C)
4. ☒ Material Storage
5. ☒ Vehicle Storage
6. ☒ Material Handling
7. ☐ Wastewater Treatment
8. ☐ Power Generation
9. ☒ Recycling
10. ☒ Landfill
99. ☐ Other: _____

I. MATERIAL HANDLING/MANAGEMENT PRACTICES

Types of materials handled and/or stored outdoors (Check all that apply)

1. ☒ Solvents
2. ☒ Scrap Metal
3. ☒ Petroleum Products
4. ☐ Plating Products
5. ☒ Pesticides
6. ☐ Hazardous Wastes
7. ☒ Paints
8. ☐ Wood Treating Products
9. ☒ Other (Please list) CARD BOARD, NEWSPRINT, GLASS, WHITE GOODS

Identify existing management practices employed to reduce pollutants in industrial storm water discharges (Check all that apply)

1. ☐ Oil/Water Separator
2. ☒ Containment
3. ☐ Berms
4. ☒ Leachate Collection
5. ☒ Overhead Coverage
6. ☒ Recycling
7. ☒ Retention Facilities
8. ☐ Chemical Treatment
9. ☐ Other (Please list)

VII. FACILITY INFORMATION

A. Total size of site (Check one) 372 ☒ Acres ☐ Sq. Ft.

B. Percent of site impervious (Including rooftops) 1 %

VIII. REGULATORY STATUS (Check all that apply)

A. ☐ Regulated by Storm water Effluent Guidelines (40 CFR Subchapter N)

B. ☒ Waste Discharge Requirements (Order Number) 93-83

C. ☒ NPDES Permit CAS 000001

D. ☐ RCRA Permit Number _____

E. ☐ Regulated by California Code of Regulations Article 6, Chapter 15 (Feeclass:

IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment." In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with.

Printed Name: EDWARD J. WALKER

Signature: E J Walker Date: 5/19/97

Title: DIRECTOR OF PUBLIC WORKS

EXHIBIT 3

State of California
State Water Resources Control Board

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ Order Nos. (91-13-DWQ & 92-12-DWQ)
(Excluding Construction Activities)

MARK ONLY ONE ITEM
1. ☐ Existing Facility
2. ☐ New Facility
3. ☒ Change of Information
WDID # 2 4 9 5 0 0 6 0 1

I. OWNER/OPERATOR

Name: SONOMA COUNTY PUBLIC WORKS

A. Owner/Operator Type (Check one)
1. ☐ City 2. ☒ County 3. ☐ State 4. ☐ Federal
5. ☐ Special District 6. ☐ Gov. Combo 7. ☐ Private

Mailing Address: 575 ADMINISTRATION DR RM 117 5A

City: SANTA ROSA | State: CA | Zip: 95403 | Phone: 707-527-2231

Contact Person: RICHARD DOBLE

B. 1. ☐ Owner 2. ☐ Operator 3. ☒ Owner/Operator

II. FACILITY/SITE INFORMATION

Facility Name: CENTRAL DISPOSAL SITE

County: SONOMA

Street Address: 500 MECHAM ROAD

Contact Person: RICHARD DOBLE

City: PETALUMA | State: CA | Zip: 94952 | Phone: 707-527-2231

III. BILLING ADDRESS

Send to:
☐ OWNER/OPERATOR
☐ FACILITY
☐ OTHER (Enter information at right)

Name:
Mailing Address:
City: | State: | Zip:

IV. RECEIVING WATER INFORMATION

Does your site's storm water discharge to (Check one)
1. ☐ Storm drain system - Enter system owners name
2. ☒ Directly to waters of U.S. (e.g., river, lake, creek, ocean)
3. ☐ Indirectly to waters of U.S.

Name of closest receiving water: STEMPLE CREEK

STATE USE ONLY

WDID: | Regional Board Office: | Date Permit Issued:

NPDES Permit Number: CA | Order Number: | Fee Amount Received: $ | Date NOI Received:

3554

EXHIBIT 2

SONOMA COUNTY
DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
INTEGRATED WASTE DIVISION

EROSION CONTROL PLAN
CENTRAL DISPOSAL SITE
Revised May 1999

The Sonoma County Department of Transportation and Public Works Integrated Waste Division is doing the erosion control work delineated in the attached plan as described below. Significant portions of the work will be accomplished before October 30 and portions will be implemented as needed during the Fall and Winter of 1999/2000. The planned erosion control measures are shown on the Erosion Control Plan (Preliminary), May 1999, which is included as Figure 4 of the May 1999 Storm Water Pollution Prevention Plan for the site. The plan is considered preliminary since the exact extent of waste fill areas and disturbed surface areas will not be confirmed until later this year. An updated SWPPP and Erosion Control Plan will be provided before October 1, 1999.

Maintenance and Repair

Sediment deposited in Sediment Ponds Nos 1, 2, 4, 6, 7, and 8 will be removed. Sediment Pond No. 5 will not be cleaned as it is very deep pond with plenty of settling room. Sediment Pond No. 2 will be enlarged as the material is used as borrow for operations. A scraper/dump truck will be used to haul the silt from the ponds to the spreading and drying area located in an existing rock borrow area, from where it will be later used as daily cover. Sediment Pond No.3 has been backfilled and is no longer in service; however, a small area near the outlet structure will be used as a sediment trap.

All existing drainage ways will be cleaned and protected from erosion and be sufficiently stabilized by October 30, 1999. If grass slopes are not established by October 30, seed and straw will be applied and anchored with erosion control netting in ditches.

During the period between May and October 1999, the surface of the landfill and its vicinity, including all drainage channels, will be inspected to identify areas of erosion resulting from the 1998/99 winter rains. As required, based on this inspection, damaged areas will be repaired and straw and seed, riprap, or other erosion protection measures will be applied to the site. Slope damage due to 98/99 winter storms will be repaired by the end of October 1999.

Seed and Straw Placement

Bare landfill slopes will receive seed and straw (or hydroseeded) as shown on the Erosion Control Plan. Other areas which are indicated on the plan will receive straw bale dikes and silt fences. Drainage structures will be protected with trash guards to prevent plugging of their inlets.

For the Rock Extraction Project, it is the intent of the operator to implement mitigation measures to control erosion from the quarry site. Disturbance to adjacent soil areas will be kept to a minimum. Seed and straw will be applied to disturbed areas likely to be susceptible to erosion. Perimeter hay bales or silt fence will be applied as needed. All drainage from disturbed areas will pass through a sediment trap excavated at the south end of the quarry area before flowing through storm drain pipes to Sediment Pond No. 2. The approximate locations of the perimeter of the rock quarry area, its sediment trap, and various erosion control measures are shown on the Erosion Control Plan.

Drainage Improvements

All pipe dimensions and drainage improvements are designed based on the 100-year storm.

West Side of Landfill

Storm water from Sediment Pond No. 1 will flow through it's existing drainage channel to an existing 24" storm drain pipe. The existing rip-rapped channel will be cleaned and maintained as shown on the plan. Storm water from the old wood waste chipping area will flow through an existing 24" storm drain pipe then into the 36" storm drain pipe and into Sediment Pond No. 2. The designated borrow area has benches that are 25 ft wide and at intervals of 50 feet in vertical elevation. They drain toward the west into a new roadside drainage channel. This channel has been rock lined and with rock check dams at various intervals. This channel will be cleaned and maintained before October 1999. A silt basin has been constructed near the outfall of Sediment Pond No.2 for final sediment control before entering the tributary of Stemple Creek at Hammel Road. This silt basin will be cleaned prior to October 1999.

Landfill Surface

New drain inlets will be installed at the south and west sides of the landfill to improve drainage of the benches and to convey surface runoff down slope toward Sediment Ponds Nos. 2 and 6. Many of the 8-inch to 18-inch diameter down drains for storm water will be replaced with 24-inch drain pipes to improve flow characteristics and reduce the risk of clogging of the drains by litter. The locations of drain inlets and down drains are indicated on Figure 4.

East Side of Landfill

The new inlets and down drain above the existing access road along the east side will be directed toward Sediment Pond No. 5. Drainage from the wood waste chipping and compost area will drain into Sediment Pond No.4 then into Sediment Pond No. 8 and finally into Sediment Pond No. 5. All runoff from the northern perimeter of the landfill will drain into

a manhole located near the outlet of Sediment pond No. 8 where it joins the outflow from Sediment Pond No. 8 that drains to Sediment Pond No. 5.

Rock Extraction Project

Perimeter drainages will be improved and maintained to reduce run-on into the quarry area as much as possible. All runoff from the site will pass through a sediment trap before it passes through pipes to Sedimentation Pond No. 2. It is the intent of the operator to impliment mitigation measures to control erosion from the site. Disturbance to adjacent soil areas will be kept to a minimum. Seed and straw will be applied to disturbed areas likely to be susceptible to erosion. Perimeter hay bales or silt fence will be applied as needed. It is the intent of the operator to make a site survey by October 1, of each year. Best management practices will be used to mitigate potential problems. The sediment trap will be cleaned of silt before October 1 of each year and as often as needed during winters to maintain adequate silt storage capacity.

EXHIBIT 3

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
INTEGRATED WASTE DIVISION

LEACHATE MANAGEMENT PLAN UPDATE
CENTRAL DISPOSAL SITE
August 1999

BACKGROUND

In July 1997, the County submitted to the Regional Water Quality Control Board (RWQCB) the Central Landfill Leachate Management Plan (CLLMP). This Plan described how the County would manage leachate at the Central Disposal Site for the next several years. In February 1998, the County submitted to the RWQCB a status report entitled "Update on Central Landfill Leachate Management Plan" in which the County described temporary operational changes in the CLLMP that had to be made to effectively manage the leachate during the heavy rains of early 1998. The Update for October 1998 was submitted to describe how the County planned to manage the leachate during the 1998/99 rainy season in general conformance with the CLLMP. The update for May 1999 was submitted to include recent leachate volume information and to describe new developments in leachate management. This update in August 1999 is submitted to describe new developments in leachate management and to include aspects of leachate management related to the planned East Canyon expansion.

LEACHATE MANAGEMENT

Leachate Extraction Program

The County intends to install up to three leachate pumps in existing landfill gas collection wells in the Compost Operations area during the next two months to remove leachate and enhance landfill gas collection efforts. The first leachate extraction pump was installed at gas collection well GW-24 on July 21, 1999 at a depth of approximately 62 feet. The initial liquid level in the well was 27 feet below ground surface. Since the date of installation, the pump has been producing an average of about 150 gallons of leachate per hour into the leachate collection system using power from a portable generator.

The County is monitoring the results of the pumping and its impact on other gas collection wells in the vicinity to confirm that installation of additional pumps is warranted. Preliminarily, the County has observed that the first leachate extraction pump has been very effective in both removing leachate and improving landfill gas collection at the well.

When permanent power is available, which is expected to be installed by a contractor in the next two months, the County will connect the first leachate pump to the power line and commence with installation of additional pumps, if warranted by the success of the first pump.

The leachate removed from the wells is and will be pumped directly into the leachate collection, which drains to Leachate Pond No. 1. The locations of the proposed leachate pumps (to be placed within gas collection well casings) are shown on the attached Site Diagram.

In addition, we are planning to commence the installation of two deep leachate monitoring wells that would also serve as leachate extraction wells and landfill gas collection wells. These would replace two leachate monitoring wells that have been too damaged to serve their intended purpose for several years. The locations of the proposed new leachate monitoring wells are shown on the attached site plan titled "Vertical Well Field Expansion No. 4", which also indicates the proposed locations of a new set of gas collection wells on the east side of the existing landfill. We will provide the RWQCB with additional information regarding these programs as soon as it is available, at which time the County will submit a more detailed discussion in a Leachate Extraction Plan.

Filtration System

The installation of the U. S. Filters mercury filtration system was completed in July 1998 and County staff training to operate the system took place in August 1998. The filtration plant is designed to process up to approximately 86,000 gallons of leachate per day. The system has been subjected to trial runs. Based on the results, the plant is operational and will be utilized as needed to control mercury levels. However, the system was not required during the 1998/99 rainy season or since that time due to low mercury levels.

At the present time, the untreated leachate has been low enough to meet the conditions of the Santa Rosa waste water treatment plant Waste Discharge Permit. Our records indicate that mercury levels in the leachate fluctuate considerably over the course of a year. If routine testing by the County and the POTW indicate an increase in mercury content, the County will process the leachate through the filtration plant when necessary to ensure that the leachate meets the conditions of the Waste Discharge Permit.

Leachate Storage Pond Management

Leachate Pond No. 1 (LP-1)

As of the issuance of this LMP, LP-1 is at about 24 per cent of capacity with a freeboard of approximately 6.5 feet. Hauling of leachate varies considerably from day to day, with no hauling on some days of the week. The County has restructured on-site leachate collection lines so that all such lines drain directly into LP-1. In addition, two dedicated leachate collection lines have been added at the locations shown on the attached Figure A. These new

lines collect leachate from underdrains that have been and will continue to be constructed under selected new waste cells to enhance leachate collection efficiency and reduce the incidence of leachate seeps on the surface of the landfill.

A 44,800 square foot metal roof structure over the entire pond was completed in June 1999. The roof is expected to divert from the leachate pond over 800,000 gallons of rain water per year, based on 30 inches of rainfall per year, which will help to preserve available pond storage capacity and also reduce treatment and hauling costs.

As previously reported, the upper clay liner has been leaking and the leachate in the Leachate Collection and Recovery System (LCRS) is being pumped as needed to remove the liquid. There have been no indications that the liner under the LCRS has allowed any leachate to pass through. Based on the possibility that leachate seepage may be occurring, the County has contracted with EBA Wastechnologies to design an impervious membrane liner retrofit to be placed on top of the existing liner during the current dry season. The design is expected to be completed in about August 1999. The membrane will probably be similar to the material used at the newer leachate pond, LP-2.

In the interim, the County will continue to remove the liquid in the LCRS by periodic pumping. The pumped liquid will be deposited in the pond. The County is proposing a double membrane liner with a geonet LCRS in between the membranes. The proposed design was submitted in a Memo from the County to the RWQCB, dated July 14, 1999.

Leachate Pond No. 2 (LP-2)

During the winter of 1998/99, no leachate was placed in LP-2 and some rain water accumulated in the pond. Routine checking of the LCRS indicated that the rain water was leaking into the LCRS. Subsequently, in April 1999, a consultant performed leak tests to find the problem areas and numerous leaks were detected. After appropriate testing of the rain water, the RWQCB agreed to the controlled release of the rain water, which took place during May 1999 under specified monitoring procedures. The liner repairs are expected to be completed during August 1999. The County will document all repairs to the liner and the results will be available to the RWQCB.

Leachate Pond No. 2 (LCRS): The LCRS system has been pumped dry and has stayed empty since there is no liquid in the pond.

Leachate Pond No. 2 (Ground Water Subdrain): A slight trickle of ground water has been observed at the subdrain outlet and the outlet has been capped temporarily. A sump system is being designed to trap the water until it can be tested and discharged, as appropriate, or

discharged to the leachate collection/storage system. The design is expected to be completed during September 1999.

Leachate Pond No. 2 (Truck Loading Station): The County is tentatively planning a leachate truck loading station at the base of the dike slope at the west end of LP-2. This is in the area of portions of the backfilled, decommissioned Sediment Pond No. 3. This area will likely be the site of a leachate collection sump and any truck loading station design must be done in conjuction with any changes in the leachate collection system in this area. The RWQCB will be kept informed of anticipated changes in this matter.

Construction of a metal roof structure of LP-2 is planned for the Fall of 1999. The construction contract for a roof over the entire area of Leachate Pond No. 2 is scheduled to go out to bid July 27, 1999. Construction of the roof would divert an estimated 1,600,000 gallons of rain water per year, based on 30 inches of rainfall per year, which will help to preserve available pond storage capacity and also reduce hauling costs.

The pond freeboard levels are monitored daily and the levels are posted in the landfill office.

Leachate Seeps

The County follows the procedures outlined in its Leachate Seep Control Plan (LSCP), which was last updated May 1999. This document is submitted as part of each updated Storm Water Pollution Prevention Plan, which was last issued in May 1999. The LSCP describes the County's program for inspection for leachate seeps, preferred methods of leachate seep containment, alternative methods of leachate seep containment for various site and weather conditions, short-term rapid containment methods, priority assignment to multiple seeps, and follow-up inspections of leachate seep containment measures to ensure continued containment. Refer to the LSCP for more details regarding leachate seep control. The County continues to watch for leachate seeps at the surface on the landfill on a daily basis.

East Canyon Expansion Leachate

As of the issuance of this LMP update, the County and its consultants are preparing to submit a revised Joint Technical Document during August 1999 with an application for a permit for expansion of the landfill to the east into the East Canyon adjacent to the existing landfill footprint.

The design of the East Canyon portion of the landfill includes HDPE liner systems and leachate control and recovery systems (LCRS) to manage all leachate that may develop during and after construction of the landfill. The leachate that develops in the landfill footprint in the

East Canyon will be collected in an internal drainage system that delivers the leachate to a sump at the south toe of the landfill. A pump system has been designed to remove any accumulating leachate from the sump and deliver the leachate through a pipeline to Leachate Pond No. 1 for storage prior to filtration, if necessary, and hauling to the waste water treatment plant. Depending on the chemical characteristics of the East Canyon leachate, the leachate may be pumped directly into Leachate Pond No. 2, provided that tests indicate that no filtration is necessary to pre-treat the leachate before it is hauled to the waste water treatment plant. The County may recycle leachate developed from the E. Canyon waste back into the E. Canyon waste as permitted at a lined, Subtitle D landfill using injection, spray, or other approved methods. Leachate from the Central Canyon will be kept separate from E. Canyon leachate, except in the storage facilities, and will not be recycled into any part of the landfill.

Estimates provided by the County consultants indicate that the East Canyon portion of the landfill, which is separated by a barrier system from the main Central Canyon, could develop up to approximately 5,200,000 gallons of leachate per year. It will likely take several years for the East Canyon to develop the estimated level of leachate production. Also, the estimation method is known to be very conservative and probably overestimates the level of leachate production.

During the most recent year from July 1998 through June 1999, a total of 21,300,000 gallons of leachate developed from the existing Central Landfill were hauled to the waste water treatment plant. Assuming that this level of leachate production for the Central Canyon will be representative for the near future, the estimated combined total leachate production for the of the expanded landfill would be up to approximately 26,500,000 gallons per year.

The above estimates do not include a scenario in which the ground water collected in the East Canyon underdrain may become impacted with leachate. According to GeoSyntec (see the JTD), the anticipated flow of ground water from the underdrain has been estimated to be 8,000,000 gallons per year. If this water becomes impacted, it will be diverted to the leachate collection system and be treated as leachate.

The present filtration plant is capable of handling 60 gallons per minute, or approximately 86,000 gallons per day (31,000,000 gallons per year). However, the filtration plant is modular in design and additional filtration units may be easily added as needed to match any amount of leachate that may be produced.

Leachate Pond and LCRS Monitoring and Inspection Program

The LCRS and storage ponds shall be tested and inspected annually to demonstrate proper operation. While the on-site surface impoundments and leachate collection and recovery

systems are in operation, they shall be inspected monthly and after major storms to detect evidence of any of the following:

(1) deterioration, malfunctions, or improper operation of overtopping control systems (In the case of the leachate storage ponds at Central Disposal Site, the ponds will be checked for minimum permitted freeboard);

(2) sudden drops in the level of the impoundment's contents (Pond liquid levels are to be checked daily and recorded on logs maintained in the operating records);

(3) the presence of liquids in leak detection systems (LCRS systems are to be checked and liquid pumped as necessary where it is not automatic);

(4) severe erosion or other signs of deterioration in dikes or other containment devices (Inspection of exposed areas of the liner systems and adjacent areas for indications of leaks or distress);

(5) confirm that LCRS pumps are in working condition and that electrical power to the pumps is available and operational, where applicable; and

(6) confirm that all leachate transmission pipes are in good condition and free of damage and leaks.

Leachate Hauling

The County monitors the quantities of leachate hauled from the site and a summary of the most recent information is presented in the attached table, which includes leachate quantities hauled on a monthly basis during winters since the beginning of the winter of 1996/97.

Alternative Daily Cover Demonstration Project: Posi-Shell

On May 25, 1999, the County commenced use of the spray-on Posi-Shell product for daily cover only in accordance with the County's Demonstration Project Proposal dated February 23, 1999. As previously reported, the Posi-Shell was used at various locations east of the tipping apron from May 25, 1999 to June 4, 1999, providing the County staff with training and experience with the Posi-Shell mixing and application system. However, the mix of dolomite caused frequent breakdowns of the internal pumps of the Posi-Shell application equipment and the demonstration project was suspended after the application of Posi-Shell on June 4, 1999. Subsequently, a different design mix with fly ash was evaluated and approved for use and the Posi-Shell has been back in use since June 27, 1999. Typically, the Posi-Shell is placed on

up to about 10,000 square feet of active face. Soil and wood chips are also still used on occasion, sometimes in lieu of Posi-Shell and often to supplement the Posi-Shell coverage. Daily Operating Logs of the Posi-Shell application are available in the landfill operations office. A Work Plan for the planned Posi-Shell test pad program will be submitted to the RWQCB within two weeks, followed by execution of the program as soon as possible. Use of the Posi-Shell as intermediate cover will be addressed at a later date.

Best Management Practices (BMPs)

The County will continue its BMPs by maintaining a small working face on the landfill, providing intermediate cover on areas that remain inactive for more than 180 days, and control landfill surface drainage as much as possible to reduce infiltration of rain water or runoff. The County intends to enhance leachate collection directly from the landfill by installing pumps to remove excess leachate.

As discussed above in the section Leachate Extraction Program, one of the pumps is already in operation and will remain in operation as part of our BMPs. Additional pumps will be added as soon as practicable. A total of three relatively shallow and two deep extraction wells are expected to be installed before the winter of 1999/00.

The County has installed staff gages in each pond and will continue to monitor pond levels on a daily basis. As of approximately June 1999, the County has initiated a demonstration program of using a spray-on material as alternative daily cover on a trial basis. The impact on leachate production will be monitored during this trial period.

For the present and during the 1999/2000 rainy season, the County intends to refrain from using the LP-2 for storage of leachate until the inflow to LP-1 causes the pond to reach a maximum of 80 per cent capacity. Until that occurs, the County will test accumulated rain water in LP-2 and will discharge the rain water into the creek provided that all appropriate water quality standards are met and the RWQCB concurs that such a discharge is allowable. If the water quality tests on the rain water indicate that it can not be discharged into the creek, it will be disposed of on-site on dry days or hauled to the wastewater treatment plant. When LP-1 reaches a maximum of 80 per cent capacity, leachate will be transferred to LP-2 directly if tests indicate that the mercury content is within limits allowed by the wastewater treatment plant. This is based on the assumption that the reported leaks are repaired adequately.

If mercury levels are above the permitted level the leachate will be processed in the mercury filtration plant before it is pumped to LP-2. When LP-2 is at 90 per cent capacity, the County plans to haul the leachate to the wastewater treatment plant or other treatment facility as prearranged to maintain the minimum design freeboard of 2 feet. However, the County

reserves the right to use either pond for leachate storage and remove or haul away leachate from either pond at any time as deemed necessary by the Division Manager. Only treated leachate or untreated leachate that meets the permit requirements for the treatment plant will be hauled off-site to the treatment plant. The leachate may also be utilized on-site as it has in the past on dry winter days for irrigation, construction water, dust control, and compost and chipping processes.

Long Term Plans

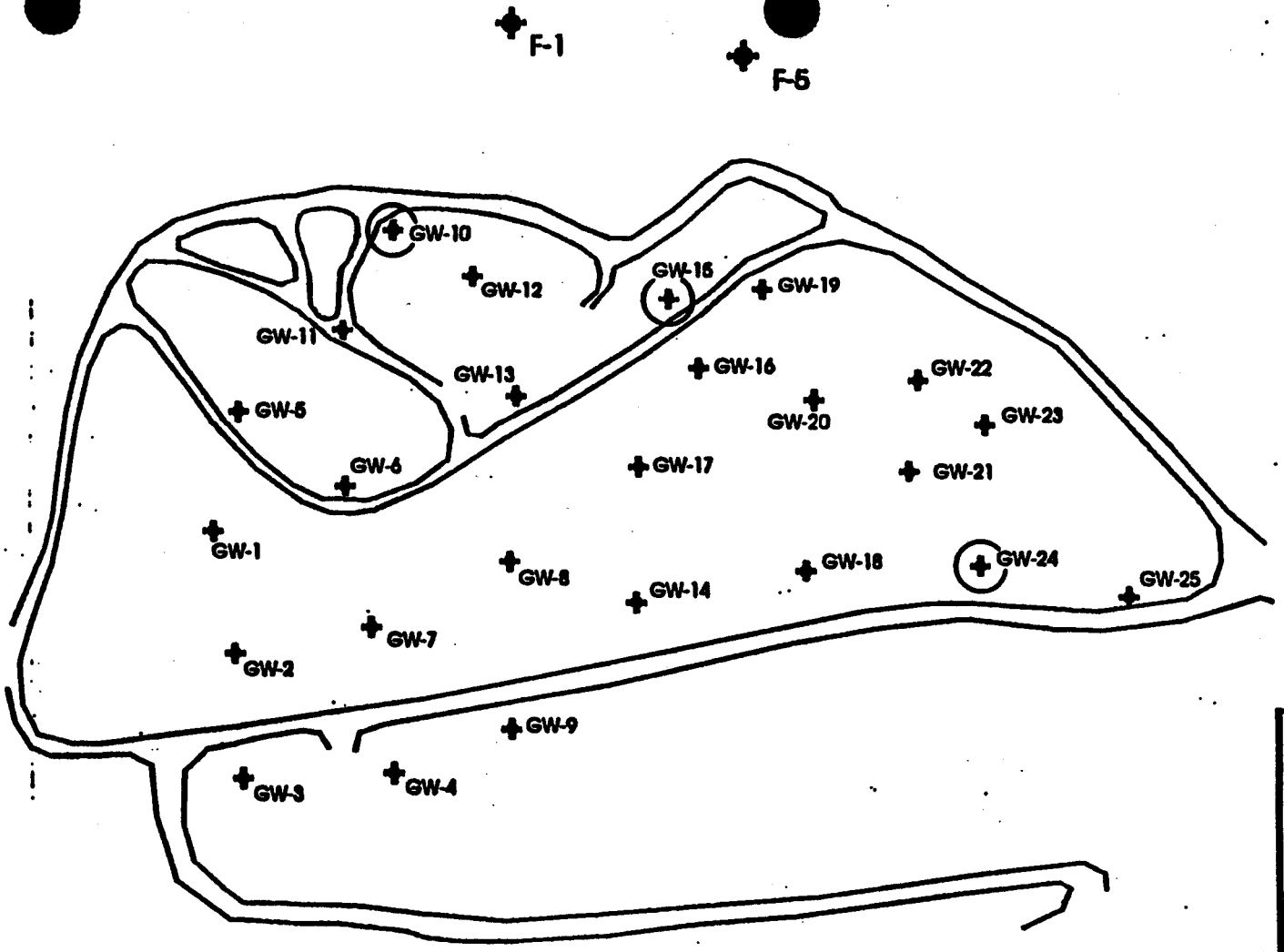
The County has contracted with EBA to investigate long term methods of leachate management and disposal, such as tree irrigation, land irrigation, evaporation enhancement by use of landfill gas energy, transport by pipeline, and use of other available technology. The results of this study should be available in August of 1999.

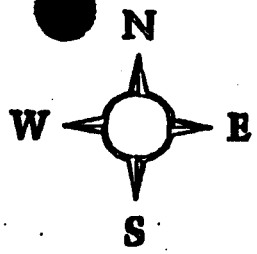
Figures

1. Site Diagram, Central Landfill, Gas Collection Wells - Compost Operations Area
2. Central Landfill Gas System, Vertical Well Field Expansion No. 4
3. Figure A, Site Map, New Leachate Subdrain and Collection System

Table

Central Landfill - Summary of Hauled and Irrigated Leachate - Winters 1996 to 1999





0 150 300

APPROXIMATE SCALE IN FEET

Indicates location of proposed leachate sump pumps (3) for existing gas wells. Gas well depths are GW-10 (72 ft.); GW-15 (58 ft.); GW-24 (80 ft.).

LEGEND

MONITORING WELL

F-1

GAS WELL

#1

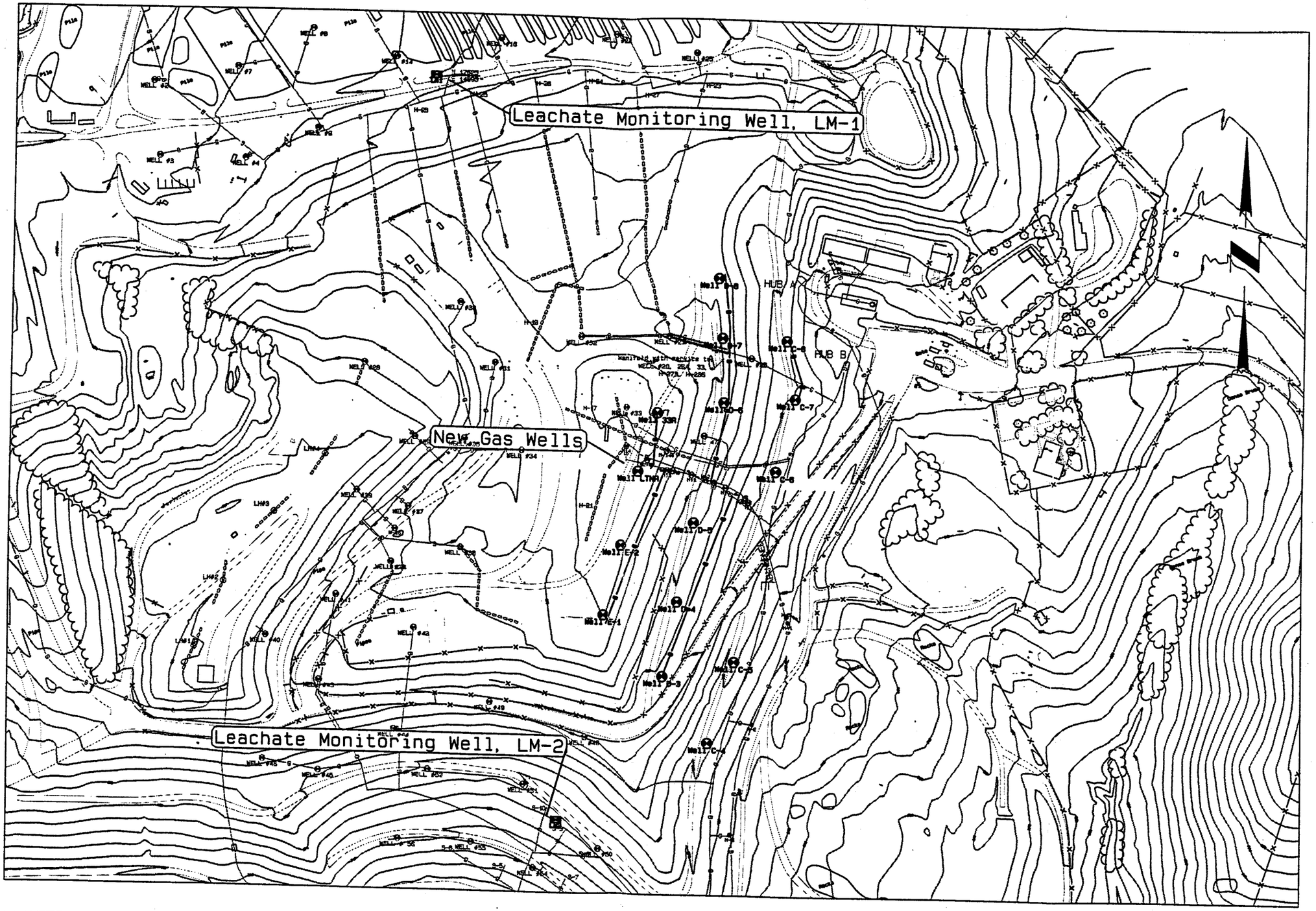
GW-1

DATE: JANUARY 1998

Sonoma County Department of Transportation and Public Works Integrated Waste Division

SITE DIAGRAM

CENTRAL LANDFILL
GAS COLLECTION WELLS-
COMPOST OPERATIONS AREA



SIGNED BY: ROBERT SPRINKLE

CHECKED BY: ALEX SEBASTIAN, P.E.

AS BUILT INFORMATION TO BE COMPLETED AFTER CONSTRUCTION

CONSTRUCTION COMPLETED:

AS BUILT DRAWINGS BY:

DATE	REVISION	BY	APPROVED

SITE PLAN

BUDGET NUMBER	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
6939	1999/00	1	1

COUNTY OF SONOMA DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
EDWARD J. WALKER, DIRECTOR

PROJECT: CENTRAL LANDFILL GAS SYSTEM
VERTICAL WELL FIELD EXPANSION NO. 4

DATE: JUNE 17, 1999 SCALE: 1" = 300'

SONOMA COUNTY
CENTRAL DISPOSAL SITE
500 MECHAM RD
PETALUMA, CA

SITE MAP

NEW LEACHATE SUBDRAIN
AND COLLECTION SYSTEM

FIGURE A

CENTRAL LANDFILL - SUMMARY OF HAULED AND IRRIGATED LEACHATE - WINTERS 1996 TO 1999

Cumulative Leachate Hauled	November	December	January	February	March	April	May	June	July	August	September	October
1998 to 1999	1,059,400	2,232,400	3,991,400	8,683,400	12,665,400	14,843,400	16,285,400	16,710,400	N/A	N/A	N/A	N/A
1997 to 1998	0	1,651,000	5,027,900	9,737,700	12,868,100	15,380,900	15,961,900	16,401,900	17,839,700	19,406,700	20,161,700	20,399,700
1996 to 1997 *	0	287,430	3,090,180	4,218,180	4,260,180	5,235,180	6,306,180	7,947,180	9,084,180	9,540,180	10,143,180	10,608,180

Monthly Leachate Hauled	November	December	January	February	March	April	May	June	July	August	September	October
1998 to 1999	1,059,400	1,173,000	1,759,000	4,692,000	3,982,000	2,178,000	1,442,000	425,000	N/A	N/A	N/A	N/A
1997 to 1998	0	1,651,000	3,376,900	4,709,800	3,130,400	2,512,800	581,000	440,000	1,437,800	1,567,000	755,000	238,000
1996 to 1997 *	0	287,430	2,802,750	1,128,000	42,000	975,000	1,071,000	1,641,000	1,137,000	456,000	603,000	465,000

Notes:

N/A Not Available

* Leachate spread in borrow areas and haul roads for dust control in dry season (April to October 1997) - total quantity of 6,348,000 gallons

EXHIBIT 4

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
INTEGRATED WASTE DIVISION

LEACHATE SEEP CONTROL PLAN
CENTRAL LANDFILL

Revised May 1999

The Sonoma County Department of Transportation and Public Works performs leachate containment work to prevent off-site migration of leachate as described below and depicted in the attached drawings.

It is recognized that the current configuration of the landfill, i.e. construction of cells which protrude above the surrounding terrain, makes leachate containment more critical than in past years where seeps might flow by gravity back into the fill. Now, uncontrolled seeps are more likely to enter the storm drain system and migrate off-site. Consequently, diligence in performing routine inspections for seeps and rapid response in their abatement is even more important.

Construction of Earthen Barriers and Placement and Compaction of Refuse Cover

In locations where the potential for leachate seepage is high, e.g., on the down gradient end of a valley, earthen barriers are constructed to ensure containment. Typical construction methods include keying the barriers into undisturbed native earth and compaction and testing as determined by the responsible engineer. Refuse is then placed and compacted against the barrier, and cover applied daily over the refuse.

Refuse is compacted during placement using Caterpillar 826C Series Landfill Compactors. Beyond maximizing landfill air space, proper compaction limits the lateral migration of leachate and provides a superior foundation for the compaction of the daily and interim cover soils. Placement of the proper thickness and compaction of cover soils limits infiltration of rainfall into the fill which in turn limits the production of leachate. As an alternative to soil daily cover, 3-mil plastic sheeting is routinely placed over the active face. This material has been approved as

Alternative Daily Cover and is the only method available during portions of the winter when saturated conditions prevent access to cover soils or the cover soils are to wet too spread and compact. A pilot demonstration program of a second Alternative Daily Cover system will begin by June 1, 1999. This system consists of a layer of sprayed on cement-based material. The disposal site supervisors are responsible for ensuring correct placement of cover materials.

When leachate is contained within the landfill interior, it will migrate downwards under the force of gravity to a leachate sump where it is removed by submersible pump and discharged to one of two surface impoundments (leachate ponds). The management of leachate from this point onward, including the treatment, storage, transport, and disposal is discussed separately within a document titled, Leachate Management Plan (Revised May 1999).

Inspection during the Wet Weather Season for Leachate Seeps

Under the supervision of a registered civil engineer, an engineering technician performs regular site inspections Monday through Friday for the presence of leachate seeps. On weekends this function is performed by the Disposal Site Supervisor. All on-site staff have been instructed to be on the look-out for such occurrences and report problems to their direct supervisors. Any new seeps or the failure of existing control measures are reported immediately to the responsible engineer. The engineer then develops a plan to contain the seep, and a crew is dispatched at the earliest opportunity to perform the work as directed.

Preferred Method of Leachate Seep Containment

The application and compaction of additional cover soils over an area where leachate is seeping from the landfill is the preferred method of abating a leachate seep. The placement of additional cover soil is consistent with the primary means of leachate containment, is the least expensive, and will likely require the least ongoing maintenance. Cover soil must be as close as possible to optimum moisture to allow for proper compaction. During the wet season, dry soil suitable for cover may be difficult to obtain. With the heavy winter rains recently experienced, saturated conditions have presented severe limitations in the application of additional cover soils. These conditions have also limited or prevented heavy equipment from gaining access to the seep area for implementation of certain alternative containment measures discussed below. Consequently methods have been developed which can be hand carried to the location. Hand placed methods may be replaced with other more effective methods as conditions dry out. During the ensuing spring and summer months, additional earth cover will be applied to identified problem areas in

an effort to prevent recurring problems the following wet season.

Alternative Methods of Leachate Seep Containment

The following leachate seep containment methods have been developed to provide a range of solutions to match the specific nature of the seep and the limitations posed by terrain and saturated conditions.

Following this discussion of the various methods are sketches depicting these methods.

Method A: Employed for chronic seeps which persist well into the dry season or seeps discovered after the onset of fall rains prior to the site becoming fully saturated.

This method involves the construction of a modified "french drain". An edge drain is installed in a narrow cut-off trench. The narrow dimension of the edge drain allows for the trench to be dug by a track-trencher, which is more likely to function on a wet slope than a track-hoe. Mirafi Miradrain 5000, a geosynthetic fabric, is rolled up the slope to catch seeps which daylight in multiple locations and direct the flow into the french drain. Cover soil is then bladed over the Miradrain to hold the fabric in place. The discharge from the drain is conveyed to the leachate ponds via a dedicated leachate conveyance line.

Method B: This method is a variation of Method A employed when conditions are dry enough to excavate a trench but too wet to spread cover soil over the Miradrain fabric.

This method temporarily substitutes plastic sheeting in lieu of dirt. The sheeting helps convey the leachate to the trench while maintaining separation from rain water and prevents storm run-off from inundating the system. When conditions dry out, Method B can be upgraded to Method A.

Method C: Employed when conditions are so saturated that no piece of heavy equipment can gain access to the seep location without causing further distress to the landfill cover.

This method involves the use of plastic sheeting and piping only to collect leachate seeping from the fillwithout the use of Miradrain fabric. Leachate travels under the sheeting to be collected in a conveyance pipe, while storm run-off travels separately over the top of the sheeting and on

towards the storm water drainage system. Method C would be replaced with Method A or simply covered with more dirt as conditions dry out.

Method D: Employed as an alternative when leachate seeps accumulate in a low spot or basin and saturated conditions prevent installation of other methods. Leachate and storm run-off are separated through the use of plastic in a means similar to methods previously described.

Method E: (new method under evaluation) Employed for isolated minor seeps located higher on landfill slopes. This method utilizes well points typically used for development of fresh water springs for a domestic water supply. The well point is driven into the ground with hand tools and its discharge is piped away to the leachate ponds.

Method F: (new method under evaluation) Employed when a minor seep appears a substantial distance from an existing leachate conveyance line and draining the leachate back into the fill is appropriate. This method utilizes a second well point to drain the leachate back into the fill.

Rapid Containment Prior to Implementation of Previously Described Methods

Other methods may be utilized to contain leachate while the above describe methods are being implemented in order to contain leachate on site. One such method is to excavate a pit in the landfill surface to contain the flow of leachate. The pit is then pumped into a water truck and either discharged into the pond or transported directly to the waste water treatment plant.

Follow-up Inspection of Leachate Seep Containment Measures to Ensure Continued Containment

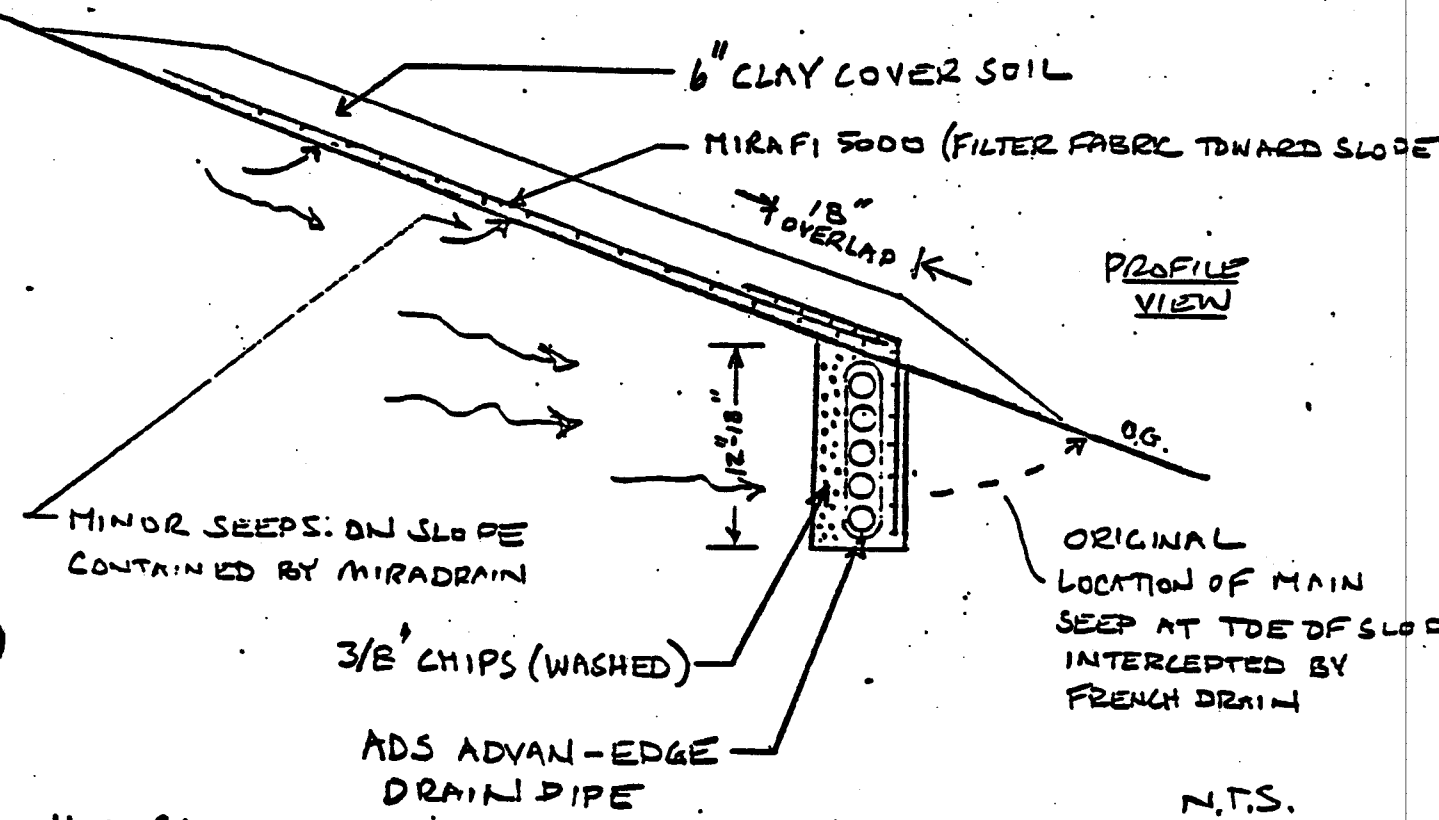
After one of the above described methods in put in place, routine inspection by an engineering technician will be preformed to verify that the "fix" is still functioning properly.

Leachate Seep Containment Performed on Basis of Priority

The identified leachate seeps will be assigned a priority and containment measures will be installed based on that priority.

LEACHATE SEEP CONTAINMENT METHOD A

FRENCH DRAIN, MIRAFI-MIRADRAIN 5000, CLAY COVER SOIL, DISCHARGE TO CONVEYANCE PIPE.



N.T.S.

NOTES:

AS CONDITIONS PERMIT, FRENCH DRAIN TRENCH CAN BE DUG WITH TRACK-TRENCHER, 3/8" CHIPS TO FILL UP HILL SIDE OF ADVAN-EDGE COLLECTOR. TRENCHER MAY NEED TO BE CABLED OFF TO MOVING DEAD MAN (SECOND MACHINE) ON NEXT BENCH UP.

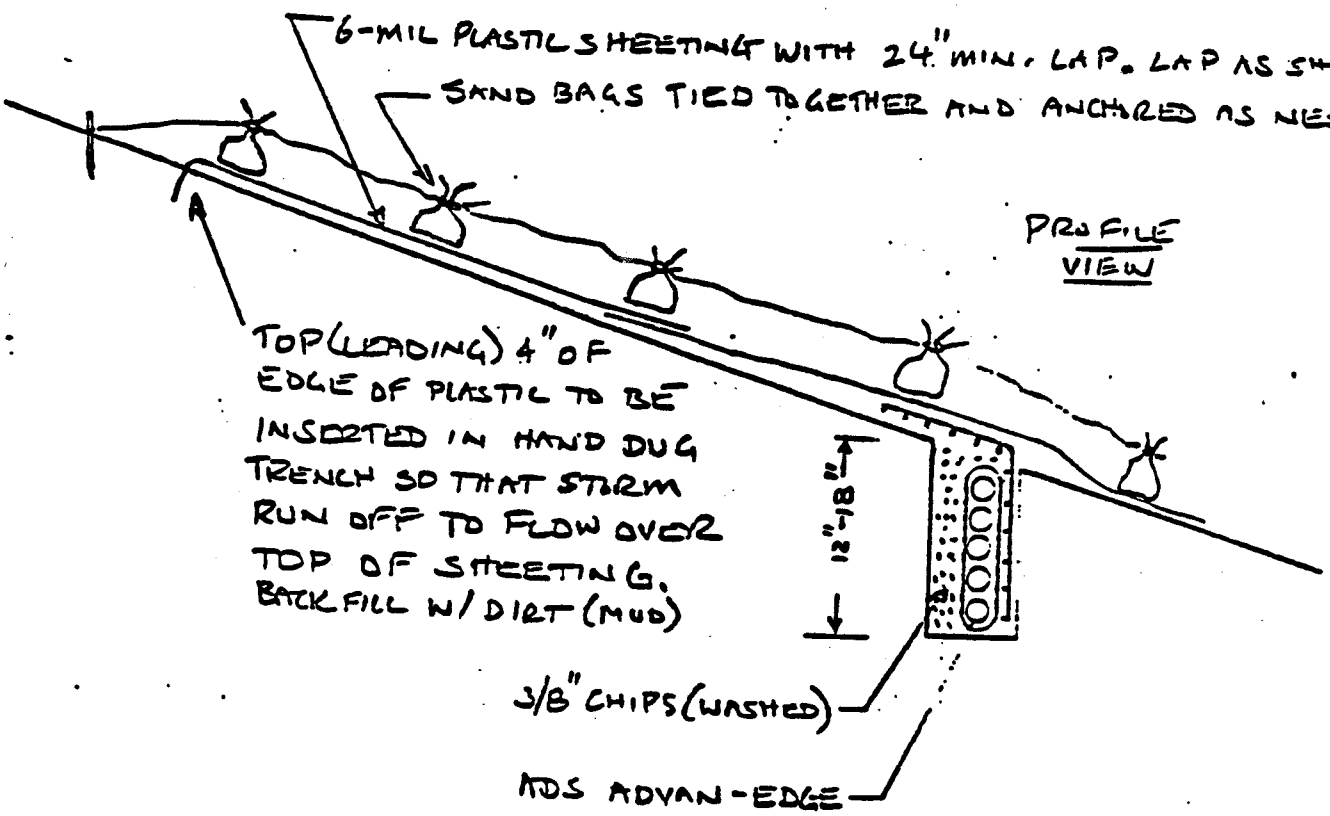
SHOULD CONDITIONS REQUIRE, A MINI-EXCAVATOR CAN BE SUBSTITUTED FOR TRENCHER, DUE TO LARGER WIDTH TRENCH, 1 1/2" DRAIN ROCK MAY BE SUBSTITUTED FOR 3/8" CHIPS.

UPHILL END OF DRAIN PIPE SHOULD BE CAPPED OFF DISCHARGE END TO CONVERT TO 2" CONVEYANCE PIPE. SIDE OUTLETS TO BE USED AT LOCALIZED LOW SPOTS WITHIN FRENCH DRAIN

DUE TO SUN (U.V.) DAMAGE TO MIRAFI MIRADRAIN 5000 ROLLS ON SITE, THE FIRST 2 WRAPS SHOULD BE CUT OFF AND DISCARDED.

LEACHATE SEED CONTAINMENT METHOD B

FRENCH DRAIN, MIRAFI-MIRADRAIN 5000 (STUB)
6-MIL PLASTIC SHEETING (VISQUEEN) COVER
IN LIEU OF EARTH COVER AS INTERIM MEASURE
SAND BAGS



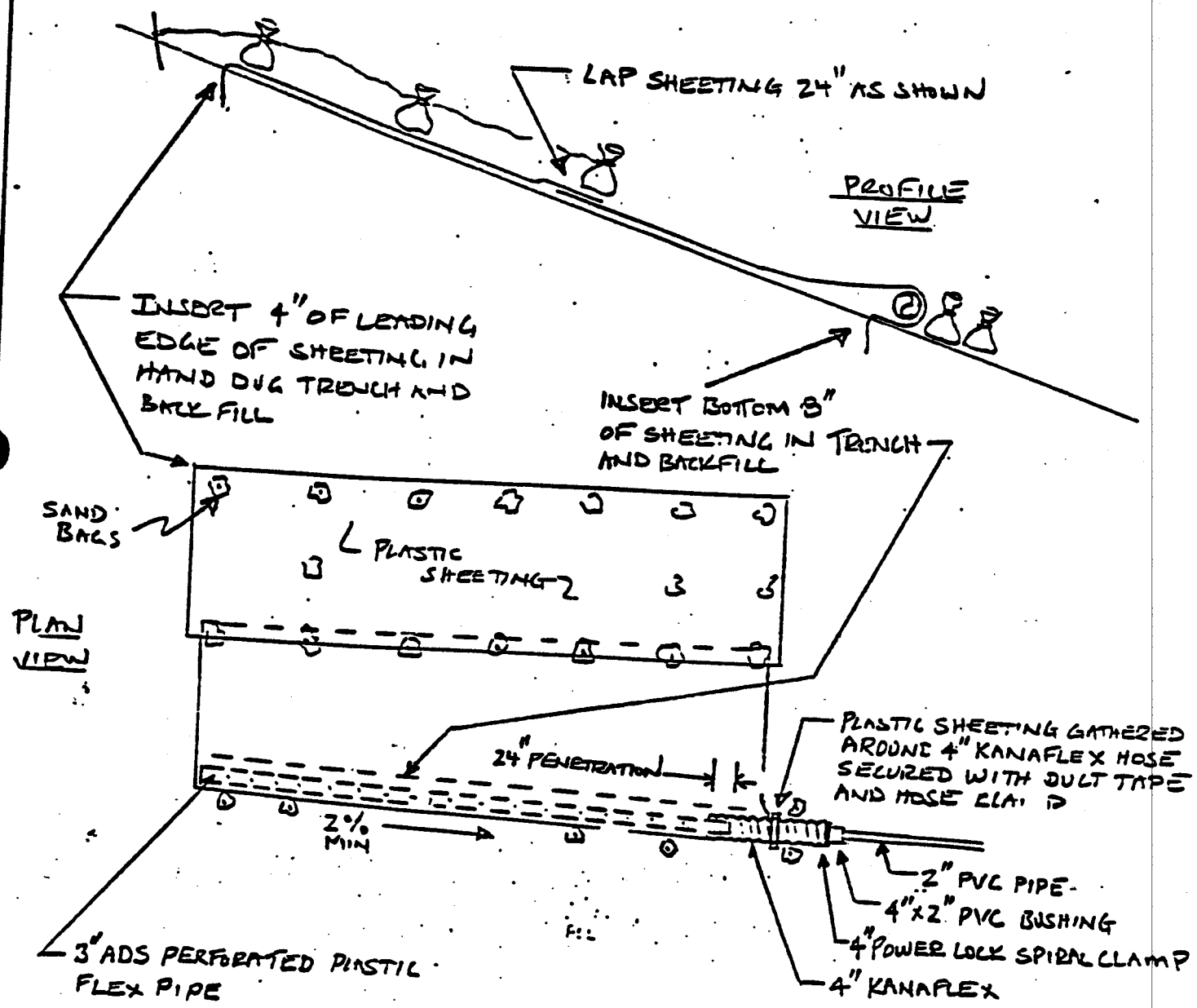
MIRAFI-MIRADRAIN 5000 INSTALLED IN FRENCH DRAIN WITH 24" STRIP PROTRUDING ABOVE GRADE. THIS TO ALLOW LATER EXTENSION.

NOTES:

SEE APPLICABLE NOTES FROM METHOD A.

LEACHATE CONTAINMENT METHOD C

BAND-AID FOR SATURATED CONDITIONS WHERE EQUIPMENT CANNOT BE UTILIZED
PLASTIC SHEETING, 3" PERFORATED PLASTIC FLEX PIPE, NON PERF PLASTIC FLEX PIPE
SAND BAGS

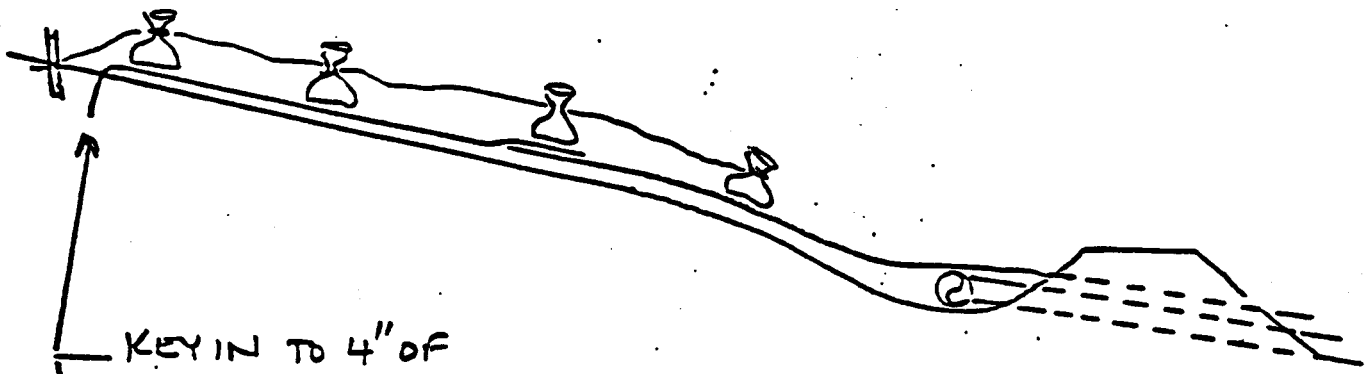


NOTES:

2" PVC DISCHARGE PIPE TO BE TRANSITIONED TO HDPE AS NECESSARY USING FLANGE ADAPTORS OR INSERT FITTINGS

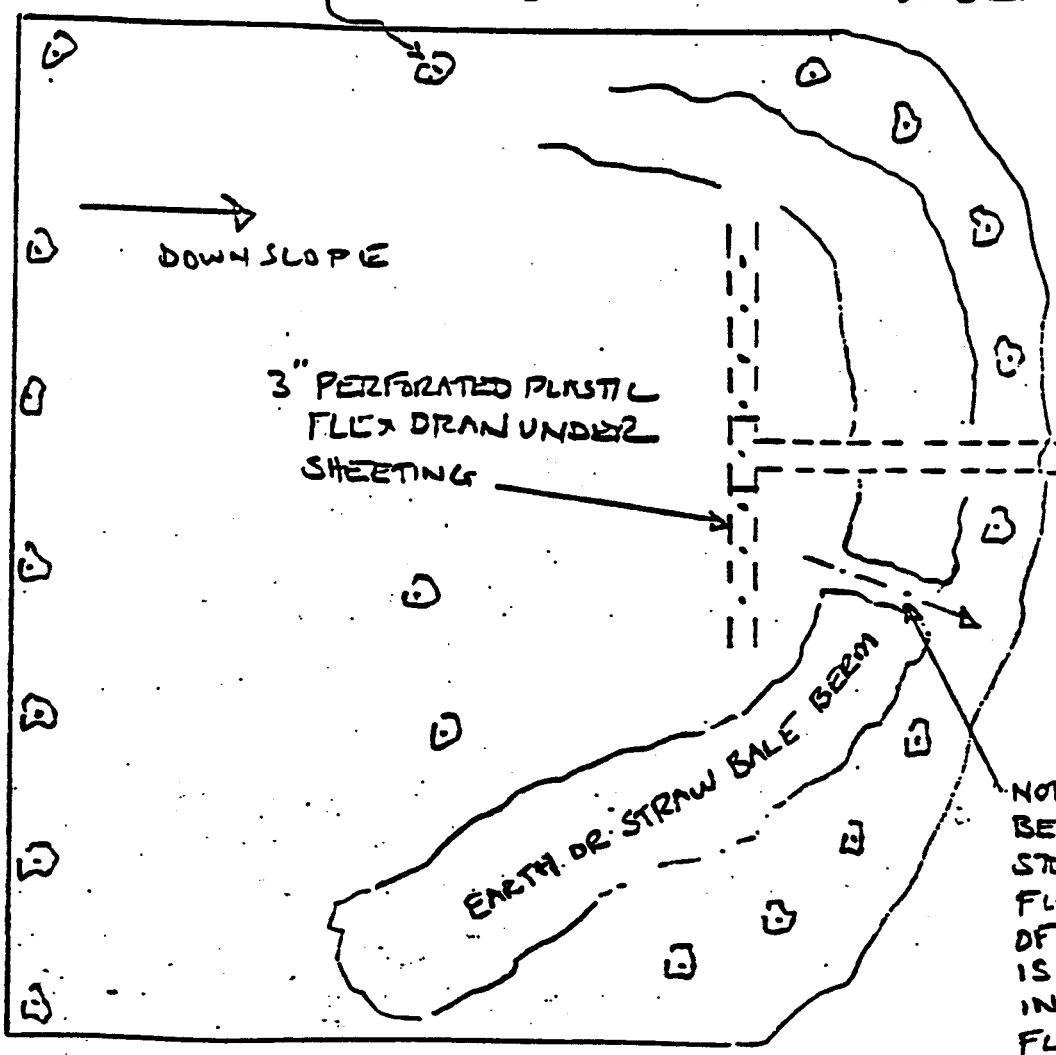
LEACHATE SEEP CONTAINMENT METHOD D

BAND-AID FOR SATURATED CONDITIONS WHERE LEACHATE ACCUMULATING IN LOW-SPOT (BASIN) BEFORE MIGRATING DOWN GRADIENT. PLASTIC SHEETING, PERF FLEX PIPE, SAND BAGS



KEY IN TO 4" OF SHEETING INTO HANDDUG TRENCH

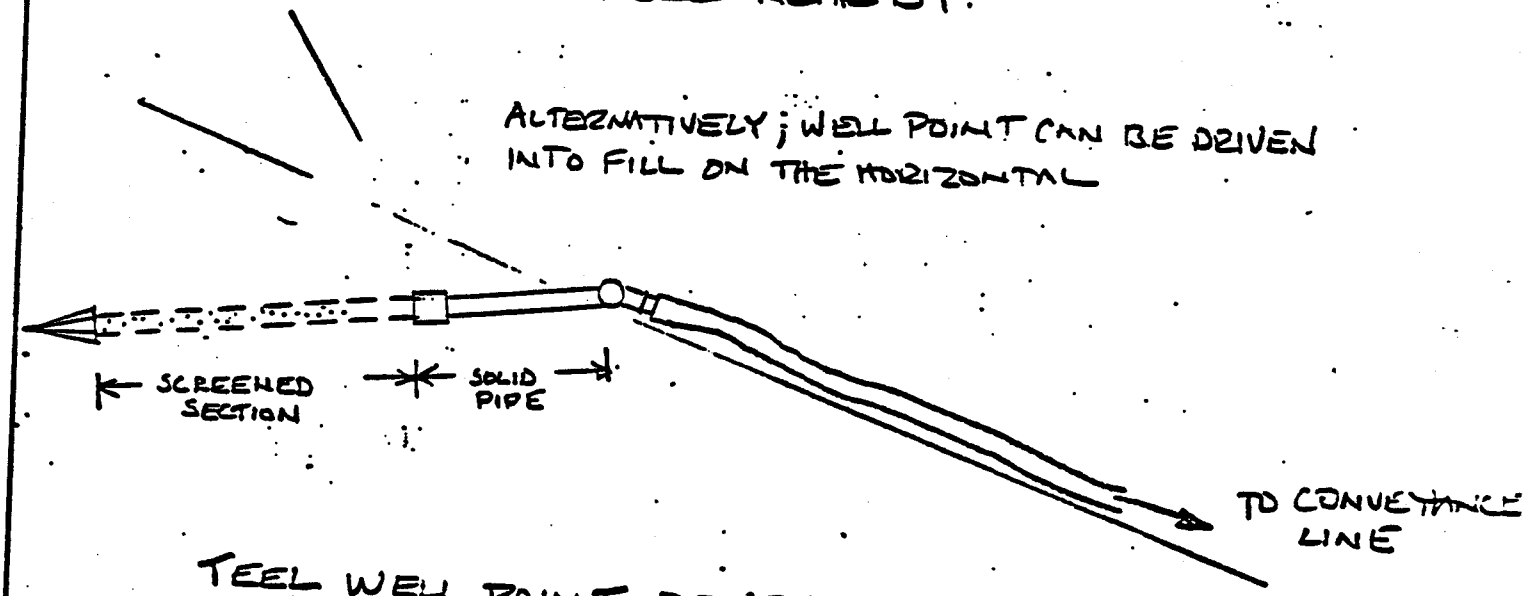
STORM RUN-OFF TO FLOW OVER SHEETING LEACHATE TO FLOW UNDER SHEETING



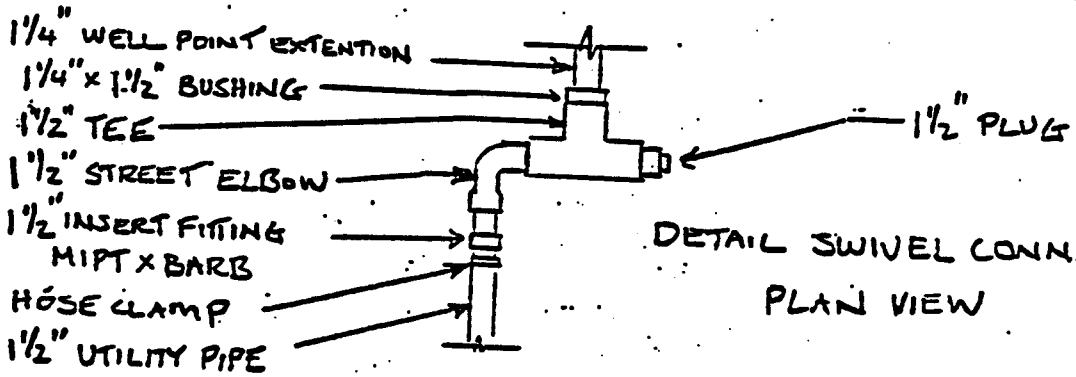
LEACHATE CONTAINMENT METHOD E

FOR ISOLATED MINOR TO MODERATE SEEPS LOCATED HIGH ON SLOPE - WHERE CONVEYANCE LINE AVAILABLE NEAR BY.

ALTERNATIVELY; WELL POINT CAN BE DRIVEN INTO FILL ON THE HORIZONTAL



TEEL WELL POINT DRIVEN INTO SEEP WHERE IT DAYLIGHTS. TOP OF SCREEN DRIVEN TO DEPTH OF 12 TO 18" USING NON-PERFORATED EXTENSION PIPE. WHILE DRIVING WELL POINT USE PROTECTIVE CAP SCREWED ON TO TOP OF WELL POINT. CAP THEN REMOVED AND REPLACE WITH THREADED COUPLINGS PER DETAIL BELOW. CONNECT TO CONVEYANCE LINE.



DETAIL SWIVEL CONNECTION
PLAN VIEW

LEACHATE CONTAINMENT METHOD F

SAME AS METHOD E EXCEPT LEACHATE DRAINED BACK INTO FILL USING SECOND WELL POINT LOCATED APPROX 20-30 DOWN SLOPE IN AREA WITH NO LEACHATE SEEPS - USE 2½" WELL POINT FOR

LEACHATE CONTAINMENT METHOD

OPTION 1

FINGER DRAINS TO COLLECT FLOWS TRAVELING DOWN EROSION GULLIES. WHERE GULLIES CANNOT BE REPAIRED UNTIL DRIER CONDITIONS.

PLACE 3" PERFORATED FLEX DRAIN INSIDE SMALL GULLIES AND COVER WITH PLASTIC SHEETING AND SAND BAGS. FLEX DRAIN DISCHARGE TO BE TIED INTO METHOD USED AT TO OF SLOPE.

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. 97-49

FOR

COUNTY OF SONOMA
CENTRAL SOLID WASTE DISPOSAL SITE
COMPOST OPERATIONS

Sonoma County

OPERATIONS

Record daily and monthly tonnages of shredded green waste, other feedstocks and additives. Record daily rainfall amounts.

Inspect compost facilities before and after all rainfall events and record observations. Record date and location of all leachate seepage, ponding, pad failure and drainage problems.

STORM WATER SAMPLING

Storm water runoff samples shall be collected monthly from November through April during or shortly after runoff producing rainfall events. Storm water samples shall be collected at the following locations:

1. Above the compost pad in the ditch that carries runon storm water around the compost pad.
2. At the outlet from the compost pond located immediately below the compost pad.
3. At the point where runoff from the compost pad discharges to surface waters downstream from the bottom of the landfill.

STORM WATER SAMPLE LABORATORY ANALYTICAL METHODS

Storm water samples shall be analyzed by a California State Certified Laboratory for the following constituents using the following EPA Methods:

Constituent	Method
Electrical Conductivity	EPA 120.1
pH	EPA 150.1
BOD	EPA 405.1 or SM5210B
Temperature	EPA 170.1
Total Nitrogen	Computed from tests below

Constituent	Method
Ammonia (ionized and unionized)	EPA 350.2
Kjeldahl Nitrogen	EPA 351.3
Nitrate Nitrogen	EPA 353.3
Nitrite Nitrogen	EPA 353.3
Total Phosphate	EPA 365.2
Orthophosphate	EPA 365.2

Field test equipment can be used for temperature, pH, and electrical conductivity.

STORM WATER MONITORING

Storm water samples shall be collected monthly from November through April from the sampling locations specified above and for the constituents specified above.

STATIC BIOASSAY TESTING

Once a year site runoff at Station #3 shall be collected and used to perform a static 96 hour bioassay test. The test species shall be juvenile rainbow trout and the results shall be reported as er cent survival.

REPORTING

Monitoring reports shall be submitted to the Regional Water Board by the 15th day of January, pril, July, and October. The data shall be arranged in tabular form on 8 1/2 by 11 sheets so that e date, the constituents, and the concentrations are readily discernible. If the discharger is unable to collect samples for any reason, the monitoring report shall sp indicate. The monitoring port and any narrative descriptions shall be properly titled, certified as true and correct, signed by a responsible official and submitted to the Regional Water Board.

Ordered by _____

Benjamin D. Kor
Executive Officer

May 6, 1997

EXHIBIT 6

From: Christine Scheib

Subject: Interim Sampling Plan

Date: February 3, 1998

MEMORANDUM

Dear Mr. Poindexter:

At your request, the following presents an Interim Sampling Plan for the Central Landfill. The interim sampling is being implemented to comply with the January 30, 1998 letter from the North Coast Regional Water Quality Control Board (NCRWQCB). The interim monitoring and reporting program will be as follows:

- At a minimum, surface sampling points SW-1 and SW-6 will be sampled on a weekly basis for the following constituents: Total Suspended Solids, Total Settleable Solids, Turbidity, Chemical Oxygen Demand, Electrical Conductivity, pH, Biological Oxygen Demand, Nitrite Nitrogen, Nitrate Nitrogen, Total Nitrogen, Total Kjeldahl Nitrogen, Ammonia, Unionized Ammonia, Total Phosphate, Orthophosphate, Total Dissolved Solids, and Total Hardness. The samples will be transported to Brelje & Race for analysis. Based on conversations with the NCRWQCB, these parameters are as required in the January 30, 1998 letter from the NCRWQCB.

- Additional internal sampling points will be sampled at the direction of the County.

- The sampling will be conducted on a weekly basis during significant storm events throughout the rainy season, but will not exceed a frequency greater than once a week.

- During the collection of samples, field parameters consisting of pH, EC, Temperature, Turbidity, and Dissolved Oxygen will be monitored using calibrated field equipment. The results will be recorded on field logs and represented in Monthly Sampling Reports.

- A monthly report will be prepared that will include results and findings, analytical data, field forms, and a site map. It is our understanding that EBA's report will be included with a monthly report from the County.

- The monthly report will include a review of the most recent data and make comparisons and recommendations for additional and/or reduced sampling parameters.

We trust this provides the information you require at this time. If you have any comments or questions, please call EBA at (707) 544-0784.

Sincerely,

Christine Scheib

Christine Scheib
Project Manager

L:\PROJECTS\CENTRAL\CORR\INTERIM.MSM

EXHIBIT 7

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
EXCLUDING CONSTRUCTION ACTIVITIES

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations (CFR) Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.

To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

instructions, and appropriate annual fee to the State Wate Board. This includes facility operators that have participated in U.S. EPA's group application process.

4. This General Permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and authorized non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law.

5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, th applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverag under the subsequent NPDES general permit.

6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act (CWA), as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.

7. This action to adopt an NPDES general permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.

8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.

9. For facilities which do not have established effluent limitation guidelines for storm water discharges in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits."

10. Facility operators are required to comply with the terms and conditions of this General Permit. Compliance with the terms and conditions of this General Permit constitutes compliance with BAT/BCT requirements and with requirements to achieve water quality standards. This includes the development and implementation of an effective Storm Water

Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges.

11. Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.

12. The State Water Board has adopted a Watershed Management Initiative that encourages watershed management throughout the State. This General Permit recognizes the Watershed Management Initiative by supporting the development of watershed monitoring programs authorized by the Regional Water Boards.

13. Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions.

14. Following public notice in accordance with State and Federal laws and regulations, the State Water Board held a public hearing on November 12, 1996 and heard and considered all comments pertaining to this General Permit. A response to all significant comments has been prepared and is available for public review.

15. This Order is an NPDES General Permit in compliance with Section 402 of the CWA and shall take effect upon adoption by the State Water Board.

16. All terms that are defined in the CWA, U.S. EPA storm water regulations and the Porter-Cologne Water Quality Control Act will have the same definition in this General Permit unless otherwise stated.

IT IS HEREBY ORDERED that all facility operators required to be regulated by this General Permit shall comply with the following:

A. DISCHARGE PROHIBITIONS:

1. Except as allowed in Special Conditions (D.1.) of this General Permit, materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.

2. Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS:

1. Storm water discharges from facilities subject to storm water effluent limitation guidelines in Federal regulations (40 CFR Subchapter N) shall not exceed the specified effluent limitations.

2. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

3. Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT/BCT constitutes compliance with this requirement.

C. RECEIVING WATER LIMITATIONS:

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan.

3. A facility operator will not be in violation of Receiving Water Limitation C.2. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:

a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality

standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

4. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;

b. Submit a report that is approved by the Regional Water Board; or

c. Revise its SWPPP and monitoring program as required by the approved report.

D. SPECIAL CONDITIONS

1. Non-Storm Water Discharges

a. The following non-storm water discharges are authorized by this General Permit provided that they satisfy the conditions specified in Paragraph b. below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back into the sea water source.

b. The non-storm water discharges as provided in Paragraph a. above are authorized by this General Permit if all the following conditions are met:

i. The non-storm water discharges are in compliance with Regional Water Board requirements.

ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.

iii. BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.

iv. The non-storm water discharges do not contain significant quantities of pollutants.

v. The monitoring program includes quarterly visua observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective.

vi. The non-storm water discharges are reported and described annually as part of the annual report

c. The Regional Water Board or its designee may establish additional monitoring programs and reporti requirements for any non-storm water discharge authorized by this General Permit.

d. Discharges from firefighting activities are authoriz by this General Permit and are not subject to the conditions of Paragraph b. above.

E. PROVISIONS

1. All facility operators seeking coverage by this General Permit must submit an NOI for each of the facilities they operate. Facility operators filing an NOI after the adoption of this General Permit shall use the NOI form and instructions (Attachment 3) attached to this General Permit. Existing facility operators who have filed an NOI pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall submit an abbreviated NOI form provided by the State Water Board. The abbreviated NOI form shall be submitted within 45 days of receipt.

2. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Wate Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in accordance with Section A of this General Permit in timely manner, but in no case later than August 1, 199 Facility operators beginning industrial activities aft

adoption of this General Permit must develop and implement an SWPPP in accordance with Section A of this General Permit when the industrial activities begin.

3. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-116) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing Monitoring Program and shall implement any necessary revisions to their Monitoring Program in accordance with Section B of the General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement a Monitoring Program in accordance with Section B of this General Permit when industrial activities begin.

4. Facility operators of feedlots as defined in 40 CFR Part 412 that are in full compliance with Section 2560 to Section 2565, Title 23, California Code of Regulations (Chapter 15) will be in compliance with all effluent limitations and prohibitions contained in this General Permit. Facility operators of feedlots that comply with Chapter 15, however, must perform monitoring in compliance with the requirements of Section B.4.d. and B.14. of this General Permit. Facility operators of feedlots must also comply with any Regional Water Board WDRs or NPDES general permit regulating their storm water discharges.

5. All facility operators must comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding storm water discharges and non-storm water discharges entering storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Boards to local agencies.

6. All facility operators must comply with the standard provisions and reporting requirements for each facility covered by this General Permit contained in Section C, Standard Provisions.

7. Facility operators that operate facilities with co-located industrial activities (facilities that have industrial activities that meet more than one of the descriptions in Attachment 1) that are contiguous to one another are authorized to file a single NOI to comply with the General Permit. Storm water discharges

and authorized non-storm water discharges from the co-located industrial activities are authorized provided that the SWPPP and Monitoring Program addresses each co-located industrial activity.

8. Upon reissuance of a successor NPDES general permit by the State Water Board, the facility operators subject to this reissued General Permit may be required to file an NOI.

9. Facility operators may request to terminate their coverage under this General Permit by filing a Notice of Termination (NOT) with the Regional Water Board. The NOT shall provide all documentation requested by the Regional Water Board. The facility operator will be notified when the NOT has been approved. Should the NOT be denied, facility operators are responsible for continued compliance with the requirements of this General Permit.

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:

    a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and

    b. Comply with the requirements of this General Permit no later than August 1, 1997.

11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.

12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any

applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.

13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:

   a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.

   b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.

3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.

4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and

Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

4/25/97

Maureen Marché
Administrative Assistant to the Board

APPENDIX C-3

RWQCB Monitoring and Reporting Program 93-83

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

ORDER NO. 93-83

GENERAL WASTE DISCHARGE REQUIREMENTS

AMENDING WASTE DISCHARGE REQUIREMENTS

FOR

MUNICIPAL SOLID WASTE LANDFILLS

AND

IMPLEMENTING PROVISIONS OF FEDERAL
MUNICIPAL SOLID WASTE LANDFILL REGULATIONS

The California Regional Water Quality Control Board, North Coast Region, (hereinafter the Regional Water Board) finds that:

1. The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, authorized development of nationwide standards for disposal of municipal solid waste.

2. On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations, 40 CFR Parts 257 and Part 258, that apply to dischargers who own or operate landfills receiving municipal solid waste. The federal regulations require each state to implement the federal regulations or an equivalent program. States with approved programs may approve engineered alternatives to certain prescriptive standards contained in the federal regulations.

3. On June 17, 1993, the State Water Resources Control Board adopted Resolution No. 93-62, entitled Policy for Regulation of Discharges of Municipal Solid Waste (Policy), as State Policy for Water Quality Control under authority of Section 13140 of the California Water Code. The Policy directs each Regional Water Quality Control Board to revise the waste discharge requirements of each municipal solid waste landfill to comply with 40 CFR Parts 257 and Parts 258.

4. On June 29, 1993, the U.S. Environmental Protection Agency tentatively approved California's modified solid waste landfill regulations.

5. The Regional Water Board proposes to comply with State Water Resources Control Board Resolution No. 93-62 through the adoption of a single order amending the waste discharge requirements of municipal solid waste landfills within the North Coast Region.

6. Adoption of the general amendment is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), Division 13, commencing with Section 21000 of the Public Resources Code because it is an action by a regulatory agency for the protection of natural resources, within the meaning of Section 15307 of the Guidelines for Implementation of California Environmental Quality Act in Title 14 of the California Code of Regulations.

7. The Board has notified the dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations.

8. The Regional Water Board, in a public hearing, heard and considered all comments pertaining to adoption of this order.

9. The USEPA has announced its intention to set back several of the compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

THEREFORE, IT IS HEREBY ORDERED that Order No. 93-83 amends the waste discharge requirements of the dischargers listed in Section 1. Each discharger shall comply with the provisions of this Order in addition to provisions of existing waste discharge requirements, provided that provisions of this Order supercede any conflicting provision in the waste discharge requirements.

SECTION 1
General Applicability

(a) This Order is applicable to all existing and lateral expansions at municipal solid waste (MSW) landfills. All MSW landfills shall implement the provisions of Chapter 15, Division 3, Title 23, California Code of Regulations (CCR) and Federal regulations in 40 CFR Part 257 and 258.

(b) This Order applies only to MSW landfills that receive waste after October 9, 1991.

(c) MSW landfills receiving waste after October 9, 1991 that halt waste acceptance before October 9, 1993 are exempt from this Order with the exception of the final cover requirements presented in 40 CFR 258.60(a) provided that final cover, meeting the requirements of Article 8, Chapter 15 and 40 CFR 258.60(a), is installed within six months of the last receipt of waste.

(d) Landfills meeting the requirements of Sections 1(b) and 1(c) above are subject to all requirements of Chapter 15, Division 3, Title 23, CCR.

(e) Dischargers shall achieve compliance with the groundwater monitoring and corrective action portions of Chapter 15 and 40 CFR Part 258 in accordance with the schedule presented in Section 10 of this Order.

(f) The discharger shall submit financial assurance documents for closure, post closure and corrective action by April 9, 1994.

(g) This Order amends the waste discharge requirements for the following dischargers.

Landfill	Discharger	Order No.
Willits Solid Waste Disposal Site Class III Waste Management Unit	City of Willits and County of Mendocino	92-107
Laytonville Solid Waste Disposal Site	County of Mendocino	75-50
Caspar Solid Waste Disposal Site	County of Mendocino and City of Fort Bragg	78-125

Cummings Road Solid Waste Disposal Site	City Garbage Company of Eureka, Inc.	93-46
South Coast Solid Waste Disposal Site	County of Mendocino	77-23
Weaverville Solid Waste Disposal Site	County of Trinity	80-193
City of Ukiah Class II-2 Solid Waste Disposal Site	City of Ukiah	75-43
Happy Camp Landfill	County of Siskiyou	77-10
Lava Beds National Monument Solid Waste Disposal Site	U.S. Department of the Interior, National Park Service	79-76
Tennant Solid Waste Disposal Site	County of Siskiyou	80-46
Hotelling Gulch Solid Waste Disposal Site	County of Siskiyou	82-103
Rogers Creek Solid Waste Disposal Site	County of Siskiyou	82-121
Sheepy Ridge Solid Waste Disposal Site, Class III Waste Management Unit	City of Tulelake	89-74
City of Weed Solid Waste Disposal Site, Class III Waste Management Unit	City of Weed	89-70
City of Yreka Solid Waste Disposal Site, Class III Waste Management Unit	City of Yreka	89-68
Class II-2 Annapolis Solid Waste Disposal Site	County of Sonoma	78-64
Central Disposal Site, Class III Waste Management Unit	County of Sonoma	89-8
Crescent City Solid Waste Disposal Site, Class III Waste Management Unit	County of Del Norte	89-100 89-83

SECTION 2
INTERIM CLASSIFICATION

This section applies to all MSW landfills listed in Subsection 1 that, as of the effective date of this Order, have not been reclassified under 23 CCR §§2510(d,e), 2530(b), and 2591(c).

(a) MSW landfills subject to this section are hereby granted interim status as Class III landfills under Chapter 15, as of the effective date of this Order, unless and until the landfill is reclassified in accordance with that chapter.

(b) Dischargers owning or operating an MSW landfill subject to this section shall submit a revised report of waste discharge by October 9, 1994, that is in full compliance with Article 9 of Chapter 15 and that provides all information necessary for the Regional Water Board to reclassify the landfill pursuant to 23 CCR §§2510(d,e) and 2591(c).

SECTION 3
Definitions

(a)	Affected Persons	All individuals who either own or occupy land outside the boundaries of the parcel upon which the landfill is located that has been or may be affected by the release of leachate or waste constituents, in the liquid or gas phase, from a MSW landfill.
(b)	Composite Liner	A liner that consists of two or more components which include a synthetic liner in direct and uniform contact with an underlying layer of low permeability soil.
(c)	Constituents of Concern	Are those constituents which are likely to be in the waste in the MSW landfill including transformation and breakdown products.
(d)	Existing Footprint	The areal projection portion of land covered by waste as of midnight on the day before the Federal Deadline. The term includes only areas covered by waste that was discharged in a manner consistent either with past good management practices or permitted operations.
(e)	Federal Deadline	The date listed in 4 CFR Part 258 when the majority of the federal MSW regulations become effective. The current date is October 9, 1993 unless otherwise modified.
(f)	Lateral Expansion	Any horizontal expansion beyond the existing footprint, as defined in subsection (d) above.

(g) MSW Landfill — For the purpose of this Order, means a Class II or Class III landfill that has accepted or accepts municipal solid waste or solid waste by-products such as ash.

(h) Unstable area — A location that is susceptible to natural or human-induced events capable of impairing the integrity of some or all of the landfill's structural components.

SECTION 4
Liner Requirements

(a) Define Existing Footprint

All dischargers operating after the Federal Deadline, shall document the existing footprint of the waste as of the Federal Deadline using photographs and topographic maps. Documentation shall be submitted to the Regional Water Board by January 15, 1994.

(b) Discharge Prohibition

As of the Federal Deadline, except as noted in subsection 3(c) below, discharge of municipal solid waste to areas that have not received waste is prohibited unless the disposal area is equipped with a composite liner meeting the following requirements:

i. The uppermost liner component is a synthetic liner at least 40 mils thick (60 mils for high density polyethylene) installed in direct contact with the underlying materials; and

ii. Has a lower liner component consisting of compacted soil at least two feet thick having a hydraulic conductivity no more than 1×10^{-7} cm/sec.

Alternative designs may be approved by the Executive Officer provided the design satisfies the criteria for an engineered alternative as defined by Chapter 15, Section 2510(b). The engineered alternative shall equal or exceed the performance of the above described composite liner system.

(c) Exemption from Prescriptive Standards

1. Liners Constructed prior to the Federal Deadline

Disposal areas constructed prior to the Federal Deadline which have not received waste as of the Federal Deadline must be retrofitted as follows:

i. A liner system consisting of a composite liner having its uppermost liner at least 40 mil thick (or 60 mil for high density polyethylene) installed in direct and uniform contact with the underlying materials.

2. Steep Sideslopes

Liner systems installed on those portions of a MSW landfill where sideslopes are too steep to permit construction of a stable composite liner meeting the criteria in Subsection 3(b) above shall include an alternative liner design that meets the performance criteria of 40 CFR 258.40(c) and is either:

i. A composite liner consisting of a 40 mil thick synthetic upper layer (60 mil thick for high density polyethylene); or

ii. Is not a composite liner, but includes a synthetic liner at least 60 mils thick (80 mils for high density polyethylene).

(d) Leachate Collection and Removal System

All liner systems shall include a leachate collection and removal system which conveys leachate to a collection point(s). Leachate conveyance on unlined or clay-lined areas is prohibited.

SECTION 5
Liquids Acceptance

(a) General Prohibition

On the Federal Deadline, the discharge of leachate or landfill gas condensate to a MSW landfill is prohibited unless:

1. The portion of the landfill to which leachate is being discharged is equipped with a composite liner meeting the requirements of Section 4(b) of this Order; and

2. The leachate or gas condensate is being returned to the landfill that produced it.

SECTION 6
Siting Criteria

(a) 100-year floodplains

All existing MSW landfills and lateral expansions located in 100-year floodplains must demonstrate that the waste management unit will not restrict the flow of the 100 year flood, reduce the temporary water storage capacity of the floodplain or result in inundation or washout of solid waste. A report documenting compliance with this provision is due by January 15, 1994.

Existing MSW landfills that cannot make this demonstration must close by October 9, 1996. The closure deadline may be extended by 2 years if the discharger

demonstrates to the Regional Water Board that there is no available alternative disposal capacity and no immediate threat to human health and the environment.

(b) Wetlands

Discharge of municipal solid waste to a wetland, as defined in 40 CFR 232.2(r), is prohibited unless the discharger completes all demonstrations required under 40 CFR 258.12(a).

(c) Fault Areas

Lateral expansions shall not be located within 200 feet of a Holocene fault. The Regional Water Board may prescribe an alternative setback less than 200 feet if the discharger demonstrates the integrity of all containment structures and that the alternative will be protective of human health and the environment.

(d) Unstable Areas

Existing MSW landfills and lateral expansions located in unstable areas must demonstrate the integrity of all containment structures. The discharger must consider factors presented in 40 CFR 258.15. A report documenting compliance with this provision is due by January 15, 1994.

If the discharger cannot demonstrate the integrity of the MSW landfill, affected portions of the landfill must close by October 9, 1996. The deadline may be extended up to two years by the Regional Water Board if the discharger demonstrates that there is no available alternative disposal capacity and there is no immediate threat to human health and the environment.

SECTION 7
Closure/Post Closure Plan

(a) Submittal of Closure Plans

1. Recently Closed MSW landfills

Dischargers who operate a MSW landfill that received waste after October 9, 1991 but will cease waste disposal by the Federal Deadline shall submit a report to the Regional Water Board by January 15, 1994 documenting that the landfill's final cover meets the requirements of 40 CFR 258.60(a) or submit modifications to its closure plan to comply with 40 CFR 258.60(a).

2. Operating MSW landfills

Dischargers who operate a MSW landfill that received waste on or after October 9, 1991 and that will not initiate final closure by the Federal Deadline, shall submit a closure and post closure maintenance plan to the Regional Water Board by the Federal Deadline that complies with 40 CFR 258.60 and 258.61 and Article 8, Chapter 15, Title 23, CCR.

3. Post Closure Maintenance

Post Closure maintenance must be conducted for minimum of 30 years.

SECTION 8
Deed Notation

(a) Deed notation

Following closure, the discharger shall provide proof to the Regional Board that the property deed or some other instrument that is normally examined during a title search has been modified, in perpetuity, to notify any potential purchaser of the property that:

i. The property has been used as a MSW landfill.

ii. Land use options for the property are restricted in accordance with the approved post closure plan and Waste Discharge Requirements for the landfill.

SECTION 9
Financial Assurance

(a) Financial assurance documents for closure, post closure and corrective action shall be prepared in accordance with the provisions of 40 CFR Part 258, Subpart G; Title 14, CCR administered by the Integrated Waste Management Board; and Article 5, Chapter 15, Division 3, Title 23, CCR.

Section 10
Implementation Schedule
Self Monitoring Program

(a) General Applicability

Unless the discharger proposes and the Executive Officer approves an alternative monitoring program that meets the requirements of Article 5, Chapter 15 and 40 CFR 258, Subpart E, the discharger shall determine compliance with this Order using the self monitoring program presented in this Order. The discharger shall implement the monitoring program as follows:

(1) By January 15, 1994 the discharger shall submit a report to the Regional Water Board that determines the distance between the waste management unit and any potential drinking water sources.

(2) Landfills within one mile of a potential drinking water source shall submit a monitoring systems report by August 9, 1994 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1994.

(3) Landfills farther than one mile from a potential drinking water source shall submit a monitoring systems report by August 9, 1995 and implement the monitoring program presented in this Order or an alternative approved program by October 9, 1995.

(b) The Monitoring Parameters and Constituent of Concern(COC) list shall be determined in accordance with Section 11 and 12 of this Order, respectively. For all new COC's, the discharger will immediately develop background concentrations and Concentration Limits in accordance with Section 13 and 14 of this Order.

(c) The Monitoring Systems Report shall:

(1) Identify all distinct bodies of groundwater that could be affected in the event of a release from the landfill. This list shall include at least the uppermost aquifer underlying the landfill and any permanent or ephemeral zones of perched water underlying the landfill;

(2) Demonstrate that the landfill's existing and proposed monitoring systems satisfy the following requirements;

(A) The groundwater monitoring system for each distinct groundwater body identified above must meet the requirements of 40 FR §§258.51(a,c, and d) and 23 CCR §2550.7(b); and

(B) Only for dischargers whose waste discharge requirements, as of the effective date of this Order, have not been revised to incorporate the July 1, 1991 revisions to Article 5, Chapter 15:

i. An MSW landfill in close proximity to any surface water body must meet the requirements of 23 CCR §2550.7(c); and

ii. An MSW landfill overlying an unsaturated zone that can be feasibly monitored must meet the requirements of 23 CCR §2550.7(d).

(3) Include a map showing the Monitoring Points, Background Monitoring Points and the Point of Compliance under 23 CCR §2550.5;

(4) Estimate the Compliance Period under 23 CCR §2550.6; and

(5) Include a list of all Constituents of Concern and Concentration Limits determined in accordance with Sections 12, 13 and 14 of this Order.

SECTION 11
Monitoring Parameters
Self Monitoring Program

(a) In accordance with the implementation schedule presented in Section 10(a), the discharger shall analyze water samples from each water-bearing medium for the following Monitoring Parameters unless the Regional Water Board approves alternative Monitoring Parameters that meet the requirements of both 23 CCR §§2550.0 et seq. and 40 CFR §§258.54. The discharger shall test the resulting data using either the statistical and non-statistical methods listed in Section 14(f) of this Order or alternative methods the Regional Water Board finds meets the requirements of 23 CCR §§2550.7(e)(6-10) and 40 CFR §258.53:

Volatile Organic Compounds (EPA method 601 and 602)
Metals (EPA 6010: arsenic, selenium and mercury by AA)
Mineral (Calcium, Magnesium, Sodium, Chloride and Sulfate)
General (Alkalinity, pH, Fluoride, Nitrate, Total Dissolved Solids and Chemical Oxygen Demand)

(b) For each medium, the Monitoring Points shall be monitored semiannually, once each Winter/Spring and Summer/Fall.

SECTION 12
Constituents of Concern
Self Monitoring Program

(a) Landfills lacking a functioning Leachate Collection System

(1) For any MSW landfill that does not have both a liner and a leachate collection and removal system (LCRS) that produces leachate, the list of Constituents of Concern (COC) is hereby revised to include all constituents listed in the waste discharge requirements as of the effective date of this Order, in addition to all constituents listed in Appendix II to 40 CFR Part 258. The discharger shall monitor all COCs every five years at a minimum; and

(2) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year, beginning with the date of this Order. Once this reference set of background data is collected, the discharger shall include it in the Monitoring Systems Report or in the next self-monitoring report.

(b) Landfills having a Leachate Collection System

(1) For any MSW landfill equipped both with a liner and with a leachate collection and removal system (LCRS) that produces leachate, the Constituent of Concern list is revised to include all waste constituents listed in the waste discharge requirements as of the effective date of this Order, and each constituent listed in Appendix II to 40 CFR Part 258 that is present in leachate samples obtained from the LCRS.

(2) A compound is defined to be present in leachate if the compound is detected in two consecutive samples from the LCRS. Samples shall be taken in October and April. The April sample is needed only when the October sample identifies new compounds not already included on the COC list.

(3) Sample results shall be submitted to the Regional Board in July of each year. The report shall identify all Appendix II constituents detected that are not on the landfill's Constituent of Concern list and all constituents which must be added to the landfill's COC list.

(4) For each Appendix II constituent that is newly added to the MSW landfill's COC list, the discharger shall establish a reference background value by analyzing at least one sample each quarter from each Background Monitoring Point for a period of at least one year following the date the constituent is submitted to the Regional Water Board as a new COC. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal.

SECTION 13
Concentration Limits
Self Monitoring Program

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter shall be established as follows, and shall be used as the basis of comparison with data from the Monitoring Points:

(a) Concentration Limits shall be set at the background value of the constituent based on historical data; or

(b) The constituent's Concentration Limit may be established during each Monitoring Period using data from all samples collected during that Monitoring Period in the event the discharger establishes the occurrence of seasonal or temporal variations in water quality; or

(c) The discharger may propose, for Regional Water Board approval, a Concentration Limit greater than background for use during, or after, corrective action.

SECTION 14
Detection Monitoring
Self Monitoring Program

The following detection monitoring program applies to each MSW landfill unless, and until, the Regional Water Board revises the waste discharge requirements for the landfill to include an alternative detection monitoring program that complies with both the federal MSW regulations and with the most recent revisions to Article 5 of Chapter 15.

(a) Sampling and Analytical Methods

Sample collection, storage, and analysis shall be performed according to the most recent version of Test Methods for Evaluating Solid Waste (USEPA publication "SW-846"), and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard USEPA Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Water Board Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board. In addition, the discharger is responsible for seeing that the laboratory analysis of all samples meets the following restrictions:

(1) The methods of analysis and the detection limits used shall be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from Background Monitoring Points, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects involved;

(2) Analytical results falling between the MDL and the practical quantitation limit (PQL) shall be reported as "trace", and shall be accompanied both by the (nominal or estimated) MDL and PQL values for that analytical run;

(3) MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California's laboratory accreditation procedures. These nominal MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived nominal MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved;

(4) All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation for any recovery rate that is less than 80%, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged;

(5) Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for reference;

(6) Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte. The MDL and PQL shall be determined or estimated for each peak.

(b) Required Monitoring Reports

(1) All Monitoring Points assigned to detection monitoring shall be monitored once each Winter/Spring and Summer/Fall (Winter/Spring and Summer/Fall Reporting Periods end on March 31 and September 30, respectively).

(2) Annual Report

The discharger shall submit an annual report to the Regional Water Board in January covering the previous monitoring year. This report may be combined with the semiannual monitoring report. The report shall contain the following at a minimum:

(A) For each Monitoring Point, laboratory data will be submitted in graphical format for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct

the discharger to carry out a preliminary investigation [23 CCR §2510(d)(2)], the results of which will determine whether or not a release is indicated;

(B) All monitoring data obtained during the previous two six-month Reporting Periods shall be presented in tabular form as well as on diskettes either in MS-DOS/ASCII format or in another file format acceptable to the Regional Water Board's Executive Officer;

(C) A comprehensive discussion of the compliance record, and any corrective actions taken or planned which may be needed to bring the discharger into full compliance with the landfill's waste discharge requirements;

(D) A map showing the area, if any, in which filling has been completed during the previous calendar year;

(E) A written summary of monitoring results and monitoring system(s), indicating any changes made or observed since the previous annual report;

(F) For MSW Landfills having leachate monitoring/control facilities, an evaluation of their effectiveness, pursuant to 23 CCR §§2543(b,c, & d).

(3) Routine Constituent of Concern Monitoring

In the absence of a release being indicated, the discharger shall monitor all Constituents of Concern and submit a report as follows:

(A) The discharger shall sample all Monitoring Points for all COCs every fifth year, beginning with the Spring of 1996. Subsequent COC monitoring efforts being carried out every fifth year thereafter, alternating between the Fall and Spring monitoring periods. The COC Report may be combined with any Monitoring Report;

(B) The discharger shall monitor for all Constituents of Concern provided that such monitoring need only encompass those Constituents of Concern that do not also serve as Monitoring Parameters.

(4) Minimum Content of Monitoring Reports

All reports shall be submitted by January 15 and July 15. The reports shall be comprised of at least the following, in addition to the specific contents listed above.

(A) A letter summarizing the essential points in the report. This letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned to correct those violations. If the discharger has previously submitted a detailed time schedule for correcting said violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. Each monitoring report and the transmittal letter shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the

discharge originates. The transmittal letter shall contain a statement by this official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

(B) For Detection Monitoring and COC Reports only:

1. For each monitored groundwater body, a description and graphical presentation of the velocity and direction of groundwater flow under/around the landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report; and

2. For each monitoring well, a description of the method and time of water level measurement and a description of the method of purging used both before sampling and after sampling to remove the water that was in the well bore while the sample was being taken; and

3. For each Monitoring Point sampled; a description of the type of pump or other device used and its vertical placement for sampling; a detailed description of the sampling procedure i.e., number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used; the date and time of sampling; the name and qualifications of the person actually taking the samples, and any other observations;

(C) A map (or copy of an aerial photograph) showing the locations of observation stations, Monitoring Points, and Background Monitoring Points;

(D) For Detection Monitoring and COC Reports only, the laboratory results of all analyses;

(E) A statement as to the condition and performance of any leachate monitoring and control facilities, and of the runoff/run-on control facilities;

(F) The quantity and types of wastes discharged and the locations in the landfill where waste has been placed since submittal of the last such report.

(c) Contingency Responses

(1) Leachate Seeps

The discharger shall immediately report by telephone concerning the discovery any previously unreported seepage from the disposal area. A written report shall be filed with the Board within seven days, containing at least the following information:

(A) A map showing the location(s) of seepage;

(B) An estimate of the flow rate;

(C) A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

(D) Corrective measures approved (or proposed for consideration) by the Regional Water Board Executive Officer.

(2) Response to Initial Indication of Release

Should the initial statistical or non-statistical comparison indicate, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified, the discharger shall: immediately notify the Regional Water Board staff verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved; shall provide written notification by certified mail within seven days of such determination [23 CCR §2550.8(j)(1)]; and shall carry out a discrete retest with 30 days in accordance with subsection (f)(3) of this section. If the retest confirms the existence of a release, the discharger shall carry out the requirements of subsection (c)(4) of this section. In any case, the discharger shall inform the Regional Water Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven days of completing the retest.

(3) Physical Evidence of a Release

If either the discharger or the Regional Water Board Executive Officer determines that there is significant physical evidence of a release [23 CCR §2550.1(3)], the discharger shall:

(A) Immediately notify the Regional Water Board by certified mail (or acknowledge the Regional Water Board's determination);

(B) Carry out the requirements of subsection (c)(4) of this section for all potentially-affected monitored media; and

(C) Carry out any additional investigations stipulated in writing by the Regional Water Board Executive Officer for the purpose of identifying the cause of the indication.

(4) Response to a Confirmed Release

If the discharger concludes that a release has been discovered:

(A) If this conclusion is not based upon monitoring for all Constituents of Concern, then the discharger shall, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis within thirty days of discovering the release. Within seven days of receiving the laboratory analytical results, the discharger shall notify the Regional Water Board, by certified mail, of the concentration of all Constituents of Concern at each Monitoring Point; this notification shall include a synopsis showing those constituents that exhibit an unusually high concentration. Because the data from this scan is not to be statistically tested against background, only a single datum is required for each Constituent of Concern at each Monitoring Point [23 CCR §2550.8(k)(1)];

(B) The discharger shall, within 90 days of confirming a release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program that:

1. Is intended to define the nature and extent of the release and meets the requirements of 23 CCR §2550.8(k)(5) and §2550.9; and

2. Satisfies the requirements of 40 CFR §258.55(g)(1)(ii) by committing to install at least one monitoring well at the facility boundary directly downgradient of the center of the release, immediately after delineating the nature and extent of the release under 23 CCR §2550.9(b);

(C) 90 days after the Regional Board directs the discharger to implement the Evaluation Monitoring Program, the discharger will submit a report delineating the vertical and horizontal limits of the release for all Constituents of Concern. This delineation effort shall be carried out in addition to any ongoing monitoring program (e.g., detection monitoring program); nevertheless, the discharger's delineation effort shall encompass all relevant monitoring data.

(D) The discharger shall, within 180 days of confirming a release, submit a preliminary engineering feasibility study meeting the requirements of 23 CCR §2550.8(k)(6).

(5) Release beyond the Facility Boundary

Any time a release beyond the facility boundary occurs, the discharger shall notify all persons who either own or reside upon the land that directly overlies any part of the plume.

(A) Initial notification to affected persons shall be accomplished within 14 days of making this conclusion and shall include a description of the discharger's current knowledge of the nature and extent of the release.

(B) Subsequent to initial notification, the discharger shall provide updates to all affected persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

(C) Each time the discharger sends a notification to affected persons, the discharger shall provide the Regional Water Board, within seven days of sending such notification, with both a copy of the notification and a current mailing list of affected persons.

(6) Response to VOC Detection in Background

Except for VOC's previously validated as not originating from the landfill, any time the laboratory analysis of a sample from a Background Monitoring Point, shows either (a) two or more VOCs at or above their respective MDL; or (b) one VOC at or above its respective PQL, then the discharger shall immediately notify the Regional Water Board by phone that possible background contamination has occurred, shall follow up with written notification by certified mail within seven days, and shall obtain two new independent VOC samples from that Background Monitoring Point and send them

for laboratory analysis of all detectable VOCs within thirty days. If either or both of these retest samples validates the presence of VOC(s) at that Background Monitoring Point, the discharger shall:

1. Immediately notify the Regional Water Board that VOC(s) are present at Background Monitoring Point(s), and follow-up with written notification submitted by certified mail within seven days of validation; and

2. Within 180 days of validation, submit a report, acceptable to the Executive Officer, which examines the possibility that the detected VOC(s) originated from the landfill (e.g., using concentration gradient analyses), and proposes appropriate changes to the monitoring program.

(B) If, after reviewing the report, the Executive Officer determines that the VOC(s) originated from a source other than the landfill, the Executive Officer will make appropriate changes to the monitoring program.

(C) If, after reviewing the report, the Executive Officer determines that the VOC(s) most likely originated from the landfill, the discharger shall conclude that a release has been detected and shall immediately investigate the release in accordance with subsection (c)(4) this section.

(d) Water Sampling and Analysis for Detection Monitoring

(1) For any given monitored medium, samples shall be taken from all Monitoring Points during the latter third of the Reporting Period within a span not exceeding 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [23 CCR §2550.7(e)(12)(B)]. Sample procurement shall be carried out as late in the Reporting Period as feasible, considering the time needed to analyze the samples, analyze the resulting data, and submit the monitoring report.

(2) Groundwater sampling shall also include an accurate measurement of the groundwater surface elevation and field parameters (temperature, electrical conductivity, turbidity) [23 CCR §2550.7(e)(13)]. Groundwater elevations shall be taken prior to purging the well.

(3) Statistical or non-statistical analysis shall be carried out as soon as the monitoring data is available.

(e) For each monitored groundwater body, the discharger shall determine the groundwater flow rate and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. This information shall be included in the semiannual monitoring reports.

(f) Statistical and Non Statistical Methods

The following data analysis methods shall be used at MSW landfills unless and until the discharger proposes, and the Regional Water Board revises the waste discharge requirements to include, data analysis methods that comply with the July 1, 1991 revision of Article 5 of Chapter 15. Nevertheless, dischargers who own or operate MSW landfills having waste discharge requirements that have been revised to comply with revised Article 5 shall use the following non-statistical data analysis methods for constituents that cannot be addressed by statistical means and shall use the

following statistical analysis scheme on those constituents for which the Regional Water Board has not yet approved a statistical method.

The discharger subject to this section shall use the most appropriate of the following methods to compare the downgradient concentration of each monitored constituent (or parameter) with its respective background concentration to determine if there has been a release from the landfill. For any given data set, the discharger shall first decide if statistical analysis is possible, by reference to the relative frequency with which the constituent is detected in background samples. For a constituent that qualifies for statistical analysis, the discharger shall proceed sequentially down the list of statistical analysis methods listed below, using the first method for which the data qualifies. Those constituents for which no statistical method is appropriate shall be analyzed by the non-statistical method. If the initial statistical/non-statistical analysis tentatively indicates the detection of a release, the discharger shall implement the retest procedure under subsection (f)(3) of this section.

(1) Statistical Methods.

The discharger shall use one of the following statistical methods to analyze Constituents of Concern or Monitoring Parameters which exhibit concentrations which equal or exceed their respective MDL in at least ten percent of the background samples taken during that Reporting Period. Except for pH, which uses a two-tailed approach, the statistical analysis for all constituents and parameters shall be one-tailed (testing only for statistically significant increase relative to background):

(A) One-Way Parametric Analysis of Variance (ANOVA), followed by multiple comparisons [§2550.7(e)(8)(A)]. This method requires at least four independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data for the parameter or constituent, obtained during a given sampling period, has not more than 15% of the data below the PQL. Prior to analysis, replace all "trace" determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section;

(B) One-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine independent samples from each Monitoring Point and Background Monitoring Point; therefore, the discharger shall anticipate the need for taking more than four samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given Sampling Period, has not more than 50% of the data below the PQL. The ANOVA shall be carried out at the 95% confidence

level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the discharger shall conclude that a release is tentatively indicated for that parameter or constituent and shall immediately implement the retest procedure under subsection (f)(3) of this section; or

(C) Method of Proportions. This method shall be used if the "combined data set" — the data from a given Monitoring Point in combination with the data from the Background Monitoring Points — has between 50% and 90% of the data below the MDL for the constituent or parameter in question. This method: (a) requires at least nine downgradient data points per Monitoring Point per Reporting Period; (b) requires at least thirty data points in the combined data set; and, (c) requires that $n * P > 5$ (where n is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL). Therefore, the discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99% confidence level. If the analysis results in rejection of the Null Hypothesis (i.e., that there is no release), the discharger shall conclude that a release is tentatively indicated for that constituent or parameter, and shall immediately implement the retest procedure under subsection (f)(3) of this section.

(2) Non-Statistical Method. The discharger shall use the following non-statistical method for analyzing all constituents which are not amenable to statistical analysis by virtue of having being detected in less than 10% of applicable background samples. A separate variant of this test is used for the VOC_{water} Composite Monitoring Parameter and for qualifying Constituents of Concern. Regardless of the test variant used, the method involves a two-step process: (a) from all constituents to which the test variant applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample from a given Monitoring Point, then (b) evaluate whether the listed constituents meet either of the test variant's two possible triggering conditions. For each Monitoring Point, the list described above shall be compiled based on either: the data from the single sample (for that constituent) taken during that Reporting Period from that Monitoring Point, or (where several independent samples have been analyzed for that constituent at a given Monitoring Point) the data from the sample which contains the largest number of detected constituents. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period (at least one sample from each Background Monitoring Point). The method shall be implemented as follows:

(A) Version for the Volatile Organics Composite Monitoring Parameter For Water Samples (VOC_{water})

For any given Monitoring Point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all detectable VOCs, including at least all 47 VOCs listed in Appendix I to 40 CFR Part 258. The discharger shall compile a list of each VOC which exceeds its MDL in the Monitoring Point sample (an unidentified peak must exceed its presumed MDL to be a candidate for the list), and also exceeds its MDL in

less than ten percent of the samples taken during that Reporting Period from that medium's Background Monitoring Points. The discharger shall conclude that a release is tentatively indicated for the VOC_{water} composite Monitoring Parameter if the list either; (a) contains two or more VOCs that equals or exceeds its MDL; or (b) contains one VOC that equals or exceeds its PQL;

(B) Version for Constituents of Concern.

During Constituent of Concern monitoring, the discharger shall compile a list of constituents of concern at each Monitoring Point that equals or exceeds their respective MDL at the Monitoring Point yet do so in less than ten percent of the background samples taken during that Reporting Period. The discharger shall conclude that a release is tentatively indicated if the list either; (a) contains two or more constituents that equals or exceeds its MDL; or (b) contains one constituent which equals or exceeds its PQL.

(3) Discrete Retest Procedure

In the event that the discharger concludes that a release has been tentatively indicated, the discharger shall collect two new suites of samples (for VOC_{water} or for the indicated Constituent[s] of Concern) from the Monitoring Point in question within 30 days of such indication. Resampling of the Background Monitoring Points is optional. As soon as the retest data is available, the discharger shall use the same statistical method as the initial test to separately analyze each of the two suites of retest data for the affected Monitoring Point. For any indicated Monitoring Parameter or Constituent of Concern, if the test results of either (or both) of the retest data suites confirms the original indication, the discharger shall conclude that a release has been discovered and shall carry out the requirements of subsection (c)(4) of this section. All retests shall be carried out only for those Monitoring Point(s) at which a release is tentatively indicated, and only for the Constituent of Concern or Monitoring Parameter which triggered the indication there, as follows:

(A) If a (parametric or non-parametric) ANOVA method was used in the initial test, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two new suites of samples taken from the indicating Monitoring Point;

(B) If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, carried out separately on each of the two new suites of samples from the indicating Monitoring Point;

(C) If the non-statistical method was used:

1. Because the VOC_{water} composite Monitoring Parameter is a single parameter which addresses an entire family of constituents likely to be present in any landfill release, the scope of the laboratory analysis for each of the two retest samples shall

include all VOCs detectable in that retest sample. Therefore, a confirming retest for either parameter shall have validated the original indication even if the detected constituents in the confirming retest sample(s) differs from those detected in the sample which initiated the retest;

2. Because all Constituents of Concern that are jointly addressed in the non-statistical test under subsection (f)(2)(B) above, remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest of Constituents of Concern shall address only those constituents detected in the sample which initiated the retest.

I, Benjamin D. Kor, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on September 22, 1993.

Benjamin D. Kor
Executive Officer

(order - Final Version)

State of California
Regional Water Quality Control Board
North Coast Region

Richard Azevedo
September 27, 1993

AMMENDMENT
EXECUTIVE OFFICER'S SUMMARY REPORT
9:00 a.m., September 22, 1993
Siskiyou County Historical Society
910 South Main Street
Yreka, California

ITEM NO. 7

SUBJECT: Amendment to Order No. 93-83, General Waste Discharge Requirements for Municipal Solid Waste Landfills.

1. Page 4, Section 3(d) should read:

Existing Footprint	The areal projection of land covered by waste...

2. Finding 9 should be added to Order No. 93-83.

The USEPA has announced its intention to set back several of the revised compliance dates contained in this Order for certain landfills, but the revised compliance dates have not been established and approved. The Regional Board's Executive Officer may adjust the compliance dates adopted by the USEPA, so long as the landfill involved qualifies for such revised dates under the revised federal MSW regulations.

PRELIMINARY STAFF RECOMMENDATION: Adopt Order No. 93-83 as modified.

(item7waste)