California Regional Water Quality Control Board
Santa Ana Region

March 4, 2005

STAFF REPORT

ITEM: 16

SUBJECT: Revision of Waste Discharge Requirements for Inland Empire Utilities Agency (IEUA) Co-Composting Facility, Order No. R8-2005-0012

DISCUSSION:

IEUA (hereinafter discharger) owns and operates a biosolids (digested municipal sewage sludge) and dairy manure composting operation located in Chino, San Bernardino County.

The facility is currently regulated under Waste Discharge Requirements, Order No. 00-50. This Order permits the discharger to accept up to 200 wet tons per day of biosolids, 1,100 tons per day of manure, and up to 400 tons per day of bulking agents. Finding 4 of Order No. 00-50 describes the materials that can be brought to the site and Finding 4.c. includes a list of the raw materials. Waste Discharge Specifications, A.6., of the Order requires the discharger to notify the Board of any changes to the list of raw materials or additives.

On January 5, 2004, the discharger submitted a Report of Waste Discharge that included the following proposed changes:

- The addition of three new bulking agents to the list of already approved bulking agents. These bulking agents are: (1) sawdust; (2) chicken-bedding litter; and (3) paper fiber from recycled newsprints. The chicken-bedding litter may include a mixture of chicken manure, straw bedding, wood shavings, and feathers. The paper fiber is dewatered to contain less than 50 percent moisture content. The total amount of incoming bulking agents will remain the same, up to 400 tons per day.

- The manure delivered to the site may now include digested manure; previously, only raw manure was delivered to the site. Digested manure has significantly lower salt content than raw manure. Again, the total volume of manure delivered to the site remains the same at 1,100 wet tons per day.

Board staff has reviewed the proposed changes and determined that these changes should have no significant adverse impact on water quality of the region if the requirements in the proposed order are complied with. The proposed order includes waste discharge specifications, special provisions for co-composting and monitoring requirements.

The requirements specified in the proposed order should ensure protection of the environment and the beneficial uses of the receiving waters. .

RECOMMENDATION:

Adopt Order No. R8-2005-0012 as presented.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

WASTE DISCHARGE REQUIREMENTS ORDER NO. R8-2005-0012 FOR INLAND EMPIRE UTILITIES AGENCY CO-COMPOSTING FACILITY CHINO, SAN BERNARDINO COUNTY

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board) finds that:

1. Inland Empire Utilities Agency, (hereinafter discharger), operates a biosolids (digested municipal sewage sludge) and dairy manure co-composting operation located in Chino, south of the intersection of Pine Avenue and Chino-Corona Road. The facility is located within the southeastern 1/4 of Section 32, T2S, R7W of the SBB&M, at latitude 33°57'20" and longitude 117°37'42". The location of the facility is shown on Attachment A, which is hereby made a part of this order.

2. The facility is currently regulated under Waste Discharge Requirements, Order No. 00-50, which allows the discharger to:

   a. Accept 200 wet tons per day of biosolids, with a monthly average of 175 wet tons per day.

   b. Accept 1,100 wet tons per day of manure at the site.

   c. Accept 400 tons per day of various bulking agents to be mixed directly with the sewage or manure compost. The approved bulking agents consist of wood shavings, rice hulls, wood chips, preprocessed clean green material containing no municipal solid waste, decorative bark, redwood compost, manure, ferrous sulfate, calcium nitrate, and gypsum.

   d. Operate a compost bagging and material screening operation housed in a building located within the permitted boundary of the facility.

   e. Store and blend the bulking materials within the existing composting operations area.

3. On January 5, 2004, the discharger submitted a complete Report of Waste Discharge to update the existing waste discharge requirements to include additional bulking agents and digested manure to the list of materials accepted at the site for composting.

4. The discharger proposes to add three additional bulking agents to the list of acceptable bulking agents for the site. The three new bulking agents are: sawdust, chicken bedding litter, and paper fiber. The daily intake of bulking agents remains at 400 wet tons per day for the site. Chicken processing and litter bedding may include chicken manure, straw bedding, wood shavings, and feathers. A list of approved bulking agents is included as Attachment E to this permit, which is hereby made a part of this order.

5. Currently the discharger accepts up to 1,100 wet tons of raw manure. The discharger is now proposing to accept up to 1,100 wet tons manure, including raw and digested manure. Digested manure has a lower salt content than raw manure.

6. All solids and residual liquids, including precipitation that has come in contact with biosolids, manure, bulking agents or compost, are defined as "wastes", pursuant to Section 13050(d), Chapter 2, Division 7 of the California Water Code.

7. The solids, including compost, are regulated as "waste piles" under Title 27, Division 2.

8. The facility receives anaerobically digested dewatered biosolids from its own municipal wastewater treatment plants: RP1, located in Ontario, and RP2, located in Chino. It also receives dairy manure from dairies within the Chino Basin area. The composting process employs the aerated windrow system wherein biosolids or manure are mixed with recycled compost and carbonaceous bulking agents in a predetermined formulation, and built into elongated rows. The rows are mechanically turned (aerated) periodically to facilitate uniform degradation of the mix during the composting cycle. This aeration and decomposition cycle qualifies as a Process for the Further Reduction of Pathogens (PFRP), as defined in 40 CFR, Section 503. When the material has met the PFRP standard, it is moved from the composting area. The final product (compost) may undergo additional blending with soils, wood shavings, or other amendments prior to storage, curing, screening, bagging, and shipping, or it may be shipped off-site without additional processing.

9. The discharger has constructed an impervious surface impoundment within the permitted boundary of the facility to retain all liquids on site that result from a 24-hour, 25-year storm. Retained liquids include runoff derived from the composting facility operations, and from precipitation on the areas used for stockpiling, composting, product curing, screening and bagging.

10. A revised Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan contains water quality objectives and beneficial uses for waters in the Santa Ana Region.

11. The requirements contained in this order are necessary to implement the Basin Plan.

12. The composting facility overlies the Chino III Groundwater Sub-basin, the beneficial uses of which include:

    a. Municipal and Domestic Supply,
    b. Agricultural Supply,
    c. Industrial Service Supply, and
    d. Industrial Process Supply.

13. Surface drainage in the area of the composting facility is tributary to Chino Creek, Reach 1, the beneficial uses of which include:

    a. Water Contact Recreation,
    b. Non-contact Water Recreation,
    c. Warm Freshwater Habitat,
    d. Wildlife Habitat, and
    e. Support of Habitats for Rare, Threatened and Endangered Species.

14. It is necessary and appropriate to require monitoring and control of individual mineral constituents in order to protect the beneficial uses of the waters of the State.

15. In accordance with the requirements of California Environmental Quality Act, on November 18, 1998, the Inland Empire Utilities Agency Board of Directors certified the Final Mitigated Negative Declaration (FMND), SCH No. 91032018, for the revision of the Conditional Use Permit and the modification and expansion of operations at the co-composting facility. Board staff has reviewed the FMND and find that the project should not have any adverse impacts on water quality if conducted in accordance with the provisions contained in this order.

16. The Board has notified the discharger and interested agencies and persons of its intent to revise the waste discharge requirements for the composting facility, and has provided them with an opportunity to submit their written views and recommendations.

17. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that 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. WASTE DISCHARGE SPECIFICATIONS

1. The discharge of wastes (defined in Section 13050(d), Chapter 2, Division 7 of the California Water Code) to property not owned or controlled by the discharger is prohibited.

2. The composting, stockpiling, screening, processing and transporting operations shall not cause or threaten to cause a nuisance or pollution as defined in Section 13050 of the California Water Code.

3. The discharge, composting, or stockpiling of raw sewage, septic tank pumpings, or designated or hazardous wastes at the facility is prohibited.

4. Composting and storage of wastes shall be limited to the areas designated for such activities. These areas are shown on Attachment B, which is hereby made a part of this order. Any revision or modification of the designated areas, or any proposed change in operations at the facility, must be submitted in writing to the Executive Officer of the Board for review and approval before the proposed change in operations or modification of the designated areas is implemented.

5. The discharger shall conduct a site survey annually, between October 1 and October 15, to assure that the site has been properly graded and prepared for the rainy season. Survey results must be shown on an updated topographic map of the site that extends approximately one-quarter mile beyond the property boundary. This map shall be submitted to Board staff along with the site's quarterly monitoring report due on February 28.

6. Only approved additives and bulking agents shall be used at this site. A list of the approved bulking agents is included in Attachment E, which is hereby made a part of this order. Prior to use of any new additives or bulking agents not listed in Attachment E, the

discharger shall notify the Board in writing and obtain approval from the Executive Officer of the Board.

7. All areas of the composting facility shall be protected against inundation from up to and including a 100-year, 24-hour storm.

B. **PROVISIONS**

1. The discharger shall comply with the attached Monitoring and Reporting Program No. R8-2005-0012.

2. Compliance with the requirements shall be evaluated based on the following:

   a. Periodic inspection by Board staff;

   b. Evaluation of the monitoring reports submitted in accordance with the attached monitoring and reporting program; and

   c. Any other relevant information.

3. The discharger shall permit Board staff:

   a. Entry upon the premises for inspection of the facilities;

   b. To copy any records required to be kept by the discharger under the terms and conditions of this order;

   c. To sample any discharge; and

   d. To take photographs and videotapes at the facility.

4. The discharger shall maintain a copy of this order at the site so as to be available at all times to site operations personnel.

5. The discharger shall comply with all federal, state and local laws and regulations pertaining to the composting operations.

6. No bulk composted material may be used, or sold or distributed for use, within Chino Basin unless offsets of the salt added to groundwater as a result of such use are provided.

7. The discharger may market 20 percent of the finished product within the Chino Basin, provided that this 20 percent is bagged for retail sale only.

8. All precipitation and surface drainage originating outside the facility shall be diverted away from stockpiles of biosolids, manure, and bulking materials; from all composting areas; and from all compost curing and storage areas, unless such drainage is fully contained on site.

9. The disposal of liquid wastes at the site is prohibited.

10. Storm water control structures shall be protected and maintained at all times.

11. A minimum of 24 inches of freeboard must be maintained at all times in the on-site surface impoundment. If the water level in the impoundment threatens to exceed the freeboard specification, water shall be removed from the containment structure and properly disposed of at a facility permitted for such discharges.

12. Use of water stored in the surface impoundment shall be limited to composting and on-site dust control application. Any liquid that is not so used shall be hauled to a facility permitted for such discharges, and quantities hauled shall be reported in the annual report.

13. The discharger shall notify Board staff by telephone within 24 hours of any off-property discharge of facility wastewater. This notification shall be followed within 5 days by a written report including the following:

    a. The approximate date and time of the discharge;

    b. Flow rate and duration of the discharge;

    c. Type and source of the discharge;

    d. Location(s) where discharge(s) occurred;

    e. Water sample collection points, with chain of custody records;

    f. Cause of the discharge; and

    g. Description of corrective actions implemented.

    A summary report of all discharges shall be included in the annual report.

14. Any proposed change in the character or location of the composting operation, including any change of composting area boundaries, or any increase in the volume of sludge composted, must be submitted in writing to the Executive Officer of the Board for review and approval.

15. The discharger shall remove and properly relocate any wastes that are disposed of at the site in violation of these requirements. The discharger shall notify Board staff by telephone within 24 hours of the removal and relocation of such wastes.

16. The discharger shall institute a Detection Monitoring Program in accordance with §20420 of Title 27.

17. If the detection monitoring program detects a release of waste constituents at any on-site or downgradient monitoring wells in excess of the water quality protection standards established by the Executive Officer of the Board, the discharger shall institute an Evaluation Monitoring Program in accordance with §20425 of Title 27.

18. If evaluation monitoring establishes that any water quality protection standard has been exceeded at any on-site or downgradient monitoring point, the discharger shall institute a corrective action program in accordance with §20430 of Title 27.

19. The discharger shall notify the Executive Officer of the Board in writing of any proposed change in ownership or responsibility for construction, operation, closure, or

postclosure maintenance of the composting facility. This notification shall be given prior to the effective date of the change and shall include a statement by the new discharger that construction, operation, closure, and postclosure maintenance will be in compliance with any existing waste discharge requirements and any revisions thereof.

20. In the event of any change in control or ownership of land or waste discharge facilities presently controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this order by letter, a copy of which shall be immediately forwarded to this office.

21. If any portion of the facility is to be closed, the discharger shall notify the Executive Officer of the Board at least 180 days prior to beginning any partial or final closure activities. The site closure must be performed in accordance with a closure plan approved by the Executive Officer of the Board and must conform to all applicable federal and state requirements.

22. Ninety days prior to the cessation of composting operations at the facility, the discharger shall submit a workplan, subject to approval of the Executive Officer, for assessing the extent, if any, of contamination of natural geologic materials and surface waters (including ephemeral stream channels) by wastes. Within 120 days following workplan approval, the discharger shall submit an engineering report presenting results of the contamination assessment. A California registered civil engineer or certified engineering geologist must prepare the workplan, contamination assessment, and engineering report.

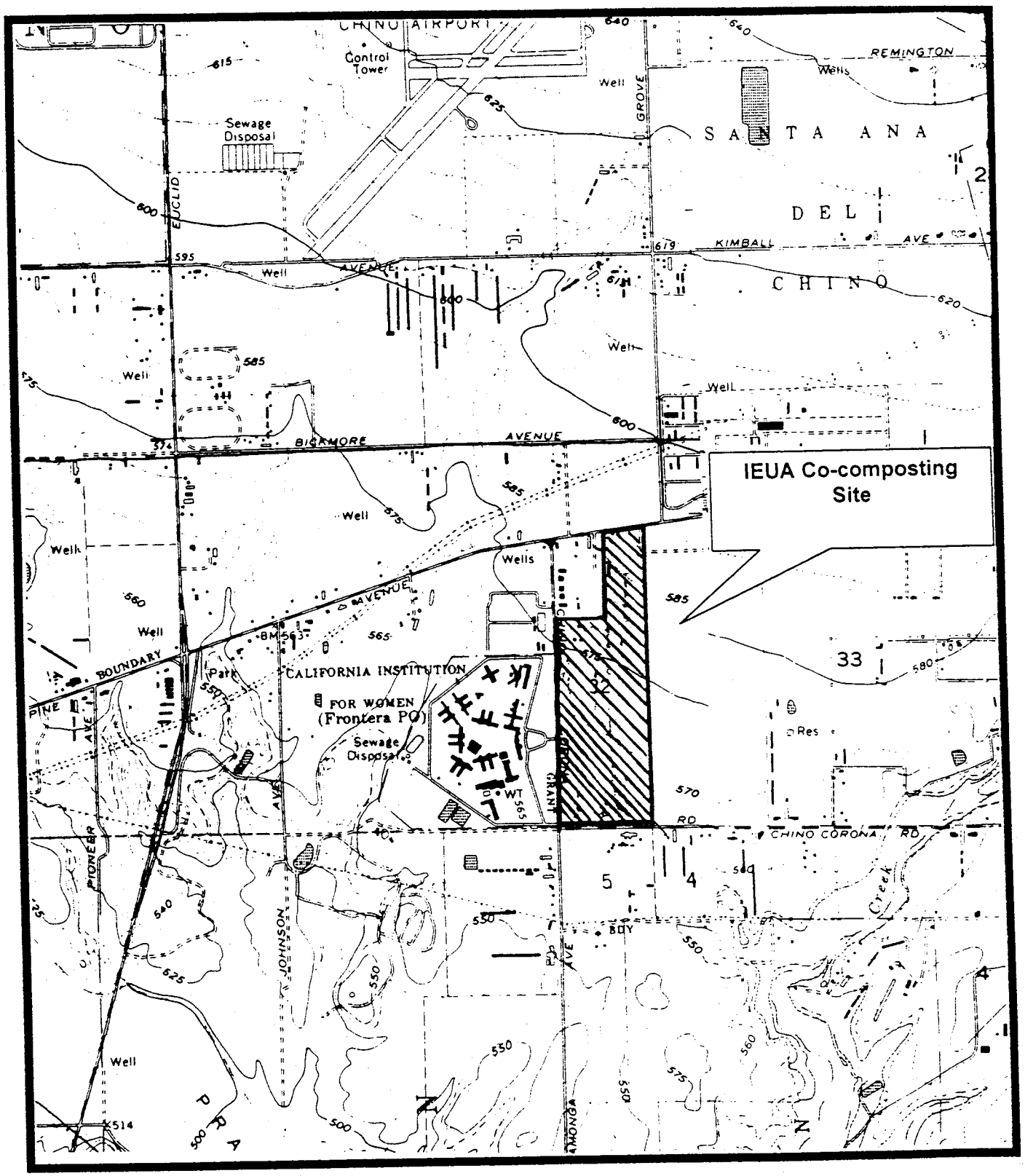
23. Upon ceasing composting operations at the facility, all wastes, all natural geologic materials contaminated by wastes, and all surplus or unprocessed composting materials shall be completely removed from the site and disposed of in a manner approved by the Executive Officer.

24. Order No. 00-50 is hereby rescinded.

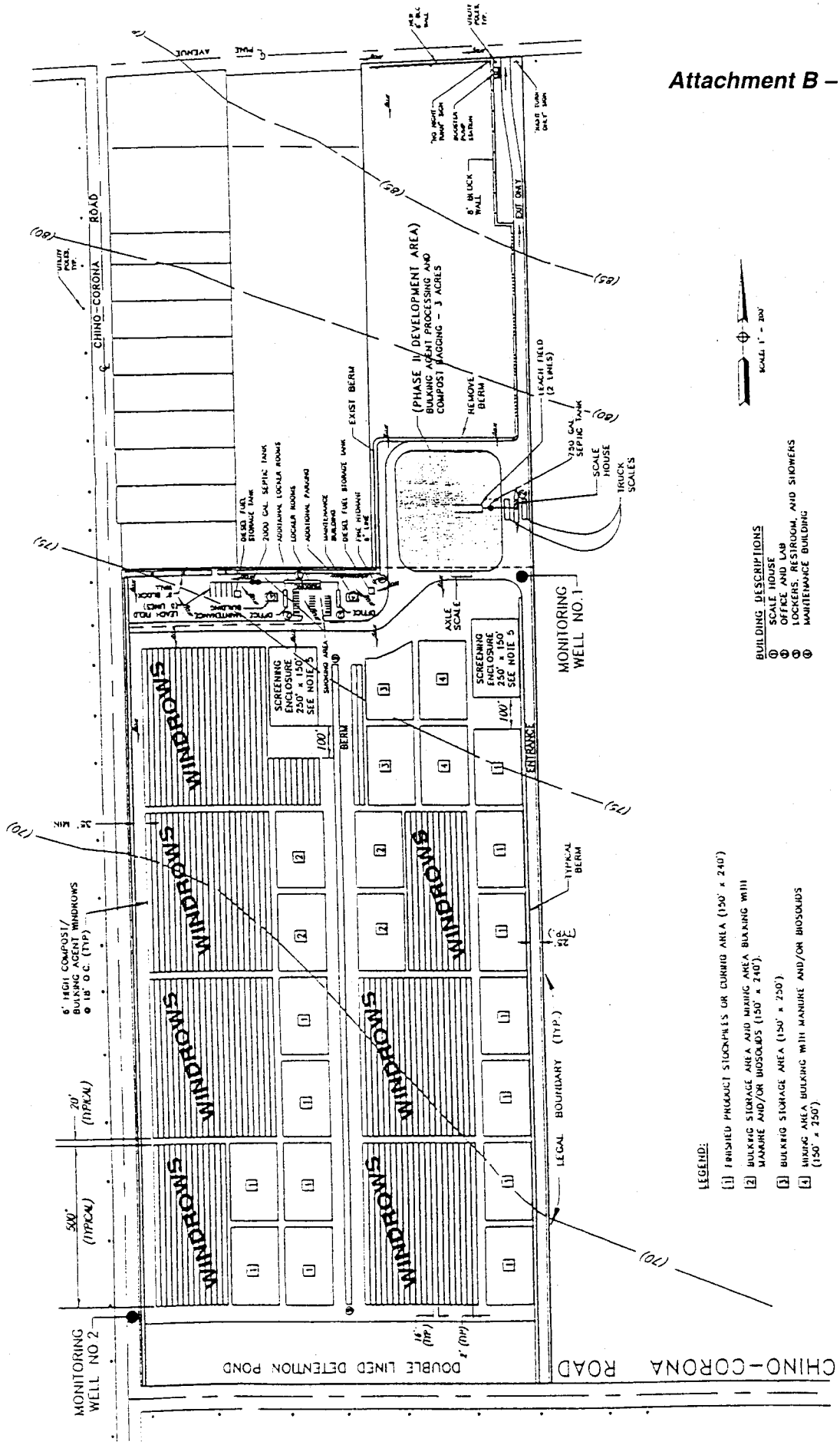
I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 4, 2005.

_____
Gerard J. Thibeault
Executive Officer

Attachment A - loc. map



Attachment B – site map



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

MONITORING AND REPORTING PROGRAM NO. R8-2005-0012 FOR INLAND EMPIRE UTILITIES AGENCY CO-COMPOSTING FACILITY CHINO, SAN BERNARDINO COUNTY

A. GENERAL

Pursuant to Section 13176, Article 4, Chapter 3, Division 7 of the California Water Code, analyses of all water and soil samples must be performed by a laboratory certified by the State Department of Health Services.

B. SITE MONITORING

1. The integrity of all asphalt and stabilized soil surfaces used for stockpiling and composting shall be inspected on a monthly basis for damage or failure, and the findings recorded in a permanent log. For any damage or failure noted, repairs must be made immediately and a report detailing such repairs submitted with the quarterly monitoring reports.

2. Diversion and drainage facilities shall be inspected each week, and comments regarding the adequacy of the facilities shall be recorded in a permanent log. This information shall be reported with the quarterly monitoring reports.

C. MATERIAL MONITORING

1. The materials monitoring program shall include the following information, submitted quarterly:

    a. Monthly summary of quantity (tons) of sludge received from each source.

    b. Average moisture content (percent) for each sludge source.

    c. Monthly summary of the quantity (tons) of manure received.

    d. Monthly summary of the type and quantity (tons) of bulking agents received.

    e. Monthly summary of quantity (tons) of composted material shipped.

    f. Hauler's manifest, or equivalent, and destination of the compost shipment.

    g. Quantity (tons) of raw, composted and bulking material remaining on-site on a monthly basis.

2. Quarterly, the discharger shall provide analytical results for each source of sludge, except for EPA Priority Pollutants, which shall be provided semi-annually. The analytical results will be those most recently prepared in accordance with the waste discharge requirements of the source plant. Analytical results shall be supplied for the following constituents:

Parameter	Units
Total Inorganic Nitrogen	mg/kg
Total Solids	Percent
pH	pH units
EPA Priority Pollutants (See Attachment C)	µg/kg

D. SURFACE IMPOUNDMENT MONITORING

1. The freeboard in the surface impoundment shall be monitored weekly and recorded in a permanent log. This information shall be incorporated into the facility's semi-annual monitoring reports. The permanent weekly logs for the facility shall be retained at a centralized location and made available to Board staff upon request during normal business hours.

2. Records of volume and quantity of any wastewater hauled from the surface impoundment, other than that to be used on-site, shall be maintained.

3. The integrity of the surface impoundment shall be inspected on a monthly basis for damage or failure, and the findings recorded in a permanent log. For any damage or failure noted, repairs must be made immediately and a report detailing such repairs submitted quarterly.

E. GROUNDWATER MONITORING

1. All groundwater samples shall be collected using equipment, procedures, and practices that minimize contamination, according to the QA/QC Plan approved by the Executive Officer.

2. Quarterly, samples shall be collected from the monitoring wells and analyzed for constituents listed in Attachment D.

3. Annually, groundwater samples collected during the second quarter sampling period shall be analyzed for constituents listed on Attachments C and D. These analytical results shall be compared with the background monitoring data.

4. Groundwater elevations in all monitoring wells shall be measured and recorded each month. During months when groundwater samples are to be obtained, the groundwater elevations shall be measured before purging the wells.

F. REPORTING

1. Quarterly reports shall be submitted according to the schedule below.

Monitoring Period	Report Due
January – March	May 31
April – June	August 31
July – September	November 30
October – December	February 28

2. The quarterly reports shall include the following:

   a. A copy of the information required in Item B, Site Monitoring;

   b. A copy of the information and analytical results required in Item C, Material Monitoring;

   c. A copy of the information and analytical results required in Item D, Surface Impoundment Monitoring; and

   d. A copy of the analytical results and monthly groundwater elevation data required by Item E, Groundwater Monitoring.

G. ANNUAL REPORT

The annual report is due by February 28 of each year and shall include the following:

1. A summary of the previous year's activity, including totals for each type of material received and shipped, and all material remaining on-site (tons).

2. A summary of any violations of the requirements contained in this permit for the previous year.

3. A summary and interpretation of the quarterly and annual groundwater analytical results, and monthly groundwater elevations as required by Item E, Groundwater Monitoring.

All reports shall be signed by an authorized agent of the discharger and shall be submitted under penalty of perjury.

Ordered by:_____

Gerard J. Thibeault
Executive Officer

March 4, 2005

Attachment C - EPA PRIORITY POLLUTANT LIST

Metals	Method
Antimony	ICP
Arsenic	GF/AA
Beryllium	ICP
Cadmium	ICP
Chromium	ICP
Copper	GF/AA
Lead	GF/AA
Mercury	CV/AA
Nickel	ICP
Selenium	GF/HYDRIDE
Silver	ICP
Thallium	ICP
Zinc	ICP

Miscellaneous	Method
Cyanide	335.2/9010
Asbestos (not required unless requested)	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	8280

Pesticides	Method
Aldrin	8080
Chlordane	"
Dieldrin	"
4, 4' - DDT	"
4, 4' - DDE	"
4, 4' - DDD	"
Alpha Endosulfan	"
Beta Endosulfan	"
Endosulfan Sulfate	"
Endrin	"
Endrin Aldehyde	"
Heptachlor	"
Heptachlor Epoxide	"
Alpha BHC	"
Beta BHC	"
Delta BHC	"
Gamma BHC	"
Toxaphene	"
PCB 1016	"
PCB 1221	"
PCB 1232	"
PCB 1242	"
PCB 1248	"
PCB 1254	"
PCB 1260	"

Base/Neutral Extractables	Method
Acenaphthene	8270
Acenaphthylene	"
Anthracene	"
Benzidine	"
Benzo (a) Anthracene	"
Benzo (a) Pyrene	"
Benzo (b) Fluoranthene	"
Benzo (g,h,i) Perylene	"
Benzo (k) Fluoranthene	"
Bis (2-Chloroethoxy) Methane	"
Bis (2-Chloroethyl) Ether	"
Bis (2-Chloroisopropyl) Ether	"
Bis (2-Ethylhexyl) Phthalate	"
4-Bromophenyl Phenyl Ether	"
Butyl Benzyl Phthalate	"
2-Chloronaphthalene	"
Chrysene	"
Dibenzo (a,h) Anthracene	"
4-Chlorophenyl Phenyl Ether	"
1,2-Dichlorobenzene	"
1,3-Dichlorobenzene	"
1,4-Dichlorobenzene	"
3,3-Dichlorobenzidine	"
Diethyl Phthalate	"
Dimethyl Phthalate	"
Di-N-Butyl Phthalate	"
2,4-Dinitrotoluene	"
2-6-Dinitrotoluene	"
1,2-Dipenylhydrazine (as Azobenzene)	"
Di-N-Octyl Phthalate	"
Fluoranthene	"
Fluorene	"
Hexachlorobenzene	"
Hexachlorobutadiene	"
Hexachlorocyclopentadiene	"
Hexachloroethane	"
Indeno (1,2,3-cd) Pyrene	"
Isophorone	"
Naphthalene	"
Nitrobenzene	"
N-Nitrosodimethylamine	"
N-Nitrosodi-N-Propylamine	"
N-Nitrosodiphenylamine	"
Phenanthrene	"
Pyrene	"
1,2,4-Trichlorobenzene	"

Acid Extractables	Method
2-Chlorophenol	8270
2,4-Dichlorophenol	"
2,4-Dimethylphenol	"
4,6-Dinitro-O-Cresol	"
2,4-Dinitrophenol	"
2-Nitrophenol	"
4-Nitrophenol	"
P-Chloro-M-Cresol	"
Pentachlorophenol	"
Phenol	"
2, 4, 6 - Trichlorophenol	"

Volatile Organics	Method
Acrolein	8030
Acrylonitrile	"
Benzene	8010/8020
Bromoform	"
Carbon Tetrachloride	"
Chlorobenzene	"
Chlorodibromomethane	"
Chloroethane	"
2-Chloroethyl Vinyl Ether	"
Chloroform	"
Dichlorobromomethane	"
1,1-Dichloroethane	"
1,2-Dichloroethane	"
1,1-Dichloroethylene	"
1,2-Dichloropropane	"
1,3-Dichloropropylene	"
Ethylbenzene	"
Methyl Bromide	"
Methyl Chloride	"
Methylene Chloride	"
1,1,2,2-Tetrachloroethane	"
Tetrachloroethylene	"
Toluene	"
1,2-Trans-Dichloroethylene	"
1,1,1-Trichloroethane	"
1,1,2-Trichloroethane	"
Trichloroethylene	"
Vinyl Chloride	"

ATTACHMENT D – QUARTERLY MONITORING PARAMETERS

Total Inorganic Nitrogen	Mg/l
Ammonia – N	Mg/l
Nitrate – N	Mg/l
Total Dissolved Solids	mg/l
PH	pH Units

ATTACHMENT E – LIST OF APPROVED BULKING AGENTS

Wood shavings

Rice hulls

Wood chips

Preprocessed clean green material containing no municipal solid waste

Decorative bark

Redwood compost

Manure (raw or digested)

Ferrous sulfate

Calcium nitrate

Gypsum

Sawdust

Chicken processing and litter bedding (may include chicken manure, straw bedding, wood shavings, and feathers)

Paper fiber