California Regional Water Quality Control Board
Central Valley Region
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Linda S. Adams
Secretary for
Environmental
Protection

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Arnold
Schwarzenegger
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18 August 2009

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7009 0960 0000 4241 9764

Technical Services
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3845 Bithell Lane
Suisun City, CA 94585

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Mr. Richard Hamilton
Hamilton Brothers Farm
P.O. Box 445
Rio Vista, CA 94571

REVISED NOTICE OF APPLICABILITY, WATER QUALITY ORDER NO. 2004-0012-DWQ GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE DISCHARGE OF BIOSOLIDS TO LAND, HAMILTON BROTHERS FARM (SO-2), SOLANO COUNTY

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Notice of Intent (NOI) on 15 December 2008 from Synagro West, Inc. and Mr. Richard Hamilton (here after jointly referred to as Discharger) to update their coverage under State Water Resources Control Board (State Water Board) Water Quality Order No. 2004-0012-DWQ, the *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities* (General Order). The Discharger submitted new information to remove a restriction in the Notice of Applicability (NOA) issued on 16 June 2005 which specified that biosolids could be applied "only every third year." Based on the information in the NOI and subsequent documentation, Central Valley Water Board staff concurs that the project meets the required conditions for approval under the General Order, without limiting application to every third year. This letter serves as formal notice that the General Order is applicable to the sites and discharge described below. This facility has been assigned a Central Valley Water Board order specific tracking number of No. 2004-0012-DWQ-0005.

A copy of the General Order is enclosed for the Discharger; otherwise it may also be viewed at the following web address:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0012.pdf.

You are urged to familiarize yourself with the contents of the entire General Order. The discharge must be managed in accordance with the requirements contained in the General Order, the information submitted in the RWD and the requirements contained in this NOA.

PROJECT DESCRIPTION
The Discharger's land application area is located in the southeastern portion of Solano County about 5 miles northwest of Rio Vista as shown in Attachment A, which is seven pages as attached and hereto made part of this NOA by reference. Approximately 969 acres of agricultural land, comprised of eight field sites, are owned by Mr. Richard Hamilton and available for biosolids application. However, due to set back buffer zone boundaries and

groundwater elevation considerations this NOA allows biosolid application to 628 acres. The application areas are shown in the table below and depicted in Attachment A with their associated set back buffer zone boundaries.

Site ID	Section	Township	Range	Gross Acreage	Allowed Acreage for Application
SO 2-7	30	4N	2E	104	62
SO 2-8	30	4N	2E	56	46
SO 2-9	30	4N	2E	127	99
SO 2-10	30	4N	2E	61	31
SO 2-11	30	4N	2E	187	156
SO 2-12	25	4N	1E	139	91
SO 2-13	19	4N	2E	148	94
SO 2-14	19	4N	2E	147	49
Total				**969**	**628**

The terrain is gently to moderately rolling, with slopes of 5 to 17 percent. The sites grow small grains and pasture grasses used for cattle grazing. The pastures are not irrigated and receive approximately 15 inches of precipitation per year as the sole water source. Site drainage is to an intermittent stream that traverses the site north to south. Site soils are typically well-drained clays of the Altamont series, underlain by siltstone at a depth of 25 to 40 inches and exhibit cation exchange capacities ranging from 15 to 30 meq/100 g, which indicates a slight potential for degradation of soil and land productivity from biosolids application. Soil pH values are typically less than 6.3, indicating a moderate potential for crop damage and crop metals accumulation due to soluble metals in biosolids.

Biosolids will be applied only between April 15 and October 15 and will be incorporated into the soil on the same day. Biosolids will be applied in accordance with the Solano County ordinance (e.g. no application during precipitation events). Setbacks that comply with the General Order and Solano County Ordinance will be marked prior to each application. The overall facility perimeter and on-site drainage/creeks will have a boundary of at least 33 feet of unmowed grass or similar vegetation. Therefore, storm water retention is not required.

GROUNDWATER CONDITIONS

The Discharger submitted a Groundwater Assessment Report dated 25 May 2005 to evaluate depth to groundwater and groundwater quality. Five direct push borings were completed at various locations to a depth of 25 feet. The groundwater table was not encountered in any of the borings.

Since the Discharger is not proposing to install groundwater monitoring wells, groundwater quality needs to be protected by limiting biosolids application to areas where the elevation will provide at least a depth of 25 feet to groundwater. The Discharger did not determine the depth to groundwater but did complete borings to a depth of 25 below ground surface. Thus, it is appropriate to limit biosolids application to the correlating elevation that did not reveal groundwater at 25 feet below ground surface as indicated by the direct push borings. Therefore, biosolids application in areas with ground surface elevations less than the elevation

investigated by the direct push boring is prohibited until the Discharger submits more current groundwater data or a groundwater monitoring installation work plan, which will require approval by Central Valley Water Board staff. The allowable application elevations are summarized in the table below and are illustrated in Attachment A.

Site ID	Application Elevation (MSL)	Boring Location	Boring Elevation (MSL)
SO 2-7,8,9	≥190	SO 2-8	190
SO 2-10,11	≥165	SO 2-11	165
SO 2-12	≥145	SO 2-12	145
SO 2-13	≥145	SO 2-13	145
SO 2-14	≥150	SO 2-14	150

MONITORING AND REPORTING

The Discharger must comply with Monitoring and Reporting Program (MRP) No. R5-2009-0847, which is attached and hereto made part of this NOA by reference. This site specific MRP replaces the requirements of the MRP contained in the General Order. The MRP is effective immediately, and requires the submittal of monthly monitoring reports. Until Central Valley Water Board staff formally terminates your coverage under the General Order, monthly monitoring reports need to be submitted even if there is no biosolid land application during the reporting period. Please reference your unique Order No. 2004-0012-DWQ-0005 and your MRP No. R5-2009-0847, when submitting your monitoring reports.

GENERAL INFORMATION AND REQUIREMENTS

The Provision D.1.a of the General Order requires that after the NOA is issued no discharge shall occur until 15 days after submission of the Pre-Application Report. The submittal of a Pre-Application Report prior to discharging under this NOA is not required because:

1. The Discharger was previously regulated under the General Order, and

2. The Discharger has been following Monitoring and Reporting Program No. R5-2005-0823.

The Discharger is required to implement its Biosolids Spill Response Plan and Monitoring and Reporting Plan. The Discharger may only apply biosolids in areas as indicated in Attachment A. Discharge of material other than what is described in the application is prohibited.

This letter serves as formal notice that Water Quality Order No. 2004-0012-DWQ is applicable, as described above. If the discharge violates the terms or conditions of the General Order, the Central Valley Water Board may take enforcement action, including assessment of administrative civil liability.

Prior to implementing any discharge changes, a new NOI must be submitted for continued coverage under the General Order or a Report of Waste Discharge must be submitted for coverage under individual Waste Discharge Requirements (RWD).

In addition, since the Discharger has not investigated site or field-specific depth to groundwater and background water quality, the Discharger shall complete a groundwater investigation, water quality evaluation and antidegradation analysis and include the results and conclusions as a component of any future NOI or RWD. The MRP No. R5-2009-0847 includes a Groundwater Monitoring section that will help you accomplish the necessary sampling.

The required annual fee specified in the annual billing from the State Water Board shall be paid until this NOA is officially terminated. Within **60 days** of the time the discharge regulated by this General Order ceases, the Discharger must notify this office in writing using the Notice of Termination form that accompanies the General Order No. 2004-0012-DWQ.

All monitoring reports submittals, discharge notifications, and questions regarding understanding these requirements as well as general compliance and enforcement shall be directed to Ms. Mary Boyd (916) 464-4676 or mboyd@waterboards.ca.gov. Questions regarding submitting an updated NOI for General Order coverage, or making changes to your permitted activities may be directed to Mr. Robin Merod at (916) 464-4697 or rmerod@waterboards.ca.gov.

Pamela C. Creedon
Executive Officer

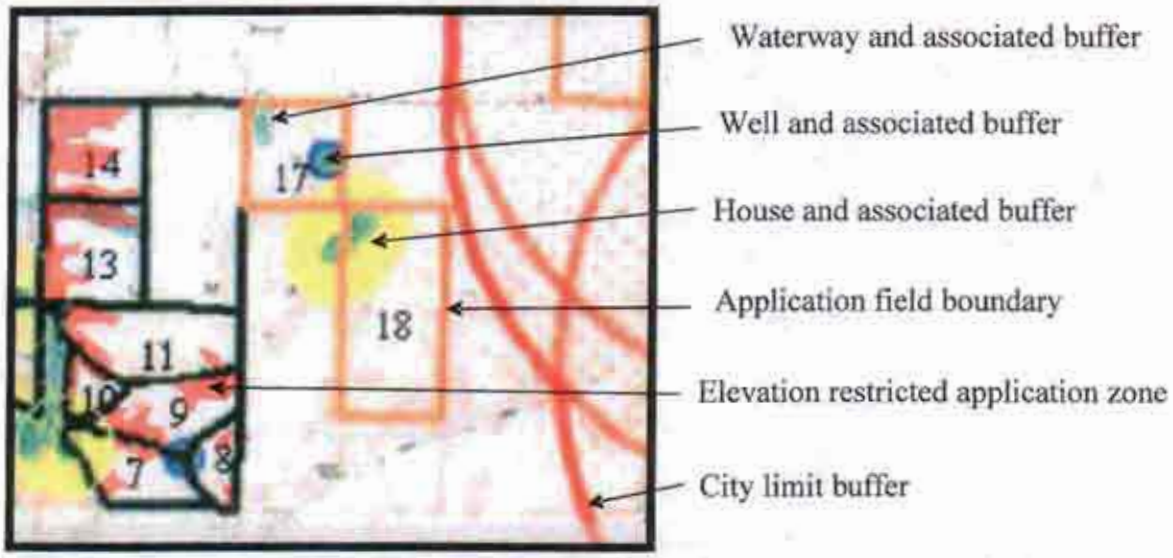
Attachments: Attachment A, Regional, Site and Field Maps
Attachment B, Monitoring and Reporting Program No. R5-2009-0847

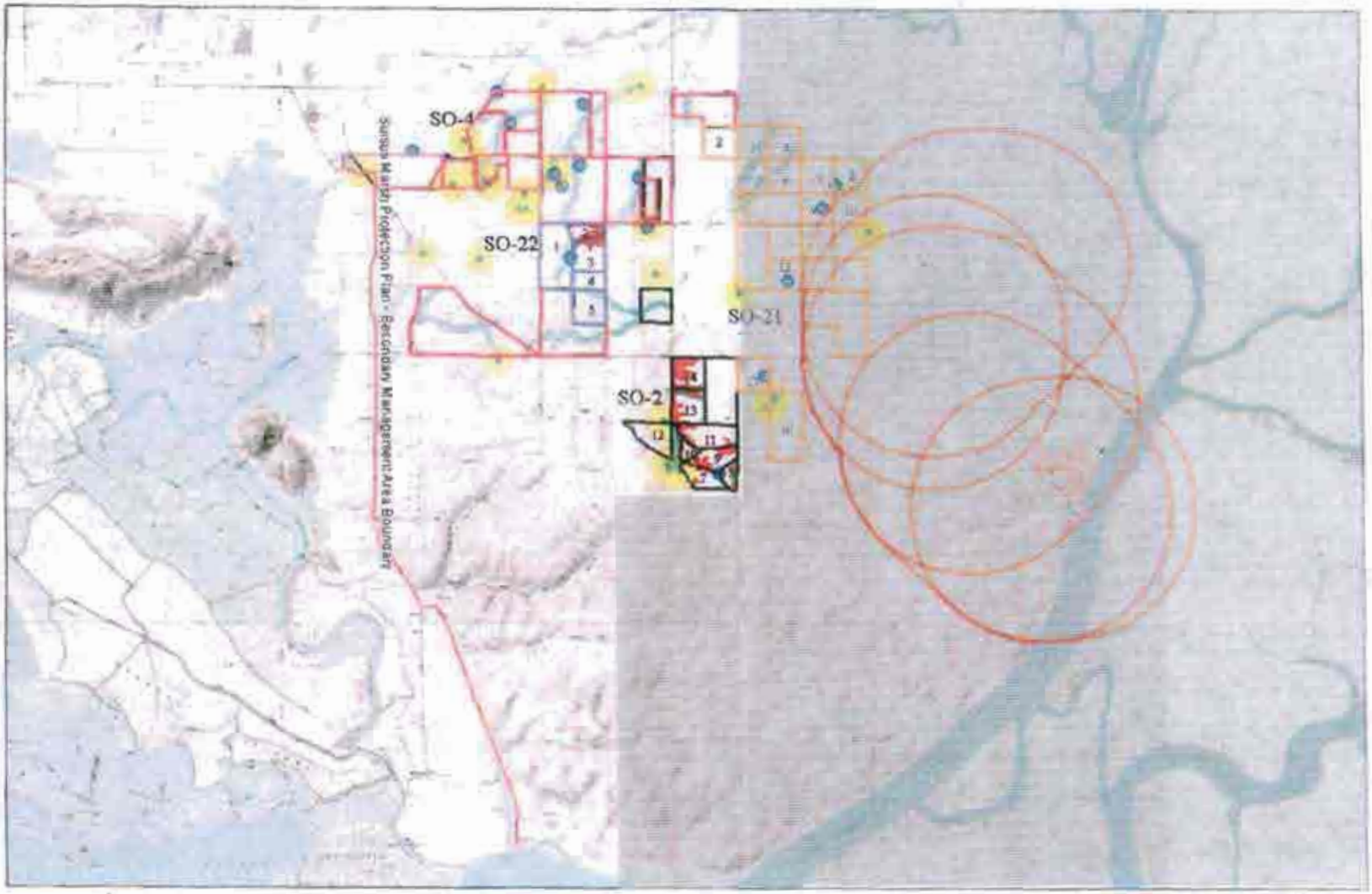
Enclosures: State Water Board Water Quality Order No. 2004-0012-DWQ

cc w/out enc.: Gordon Innes, Division of Water Quality, State Water Board, Sacramento
Jeffrey Bell, Solano County Environmental Health Department, Fairfield
Ken Johnson, Synagro Southwest, Tolleson, AZ

Attachment A

Legend for required set backs:





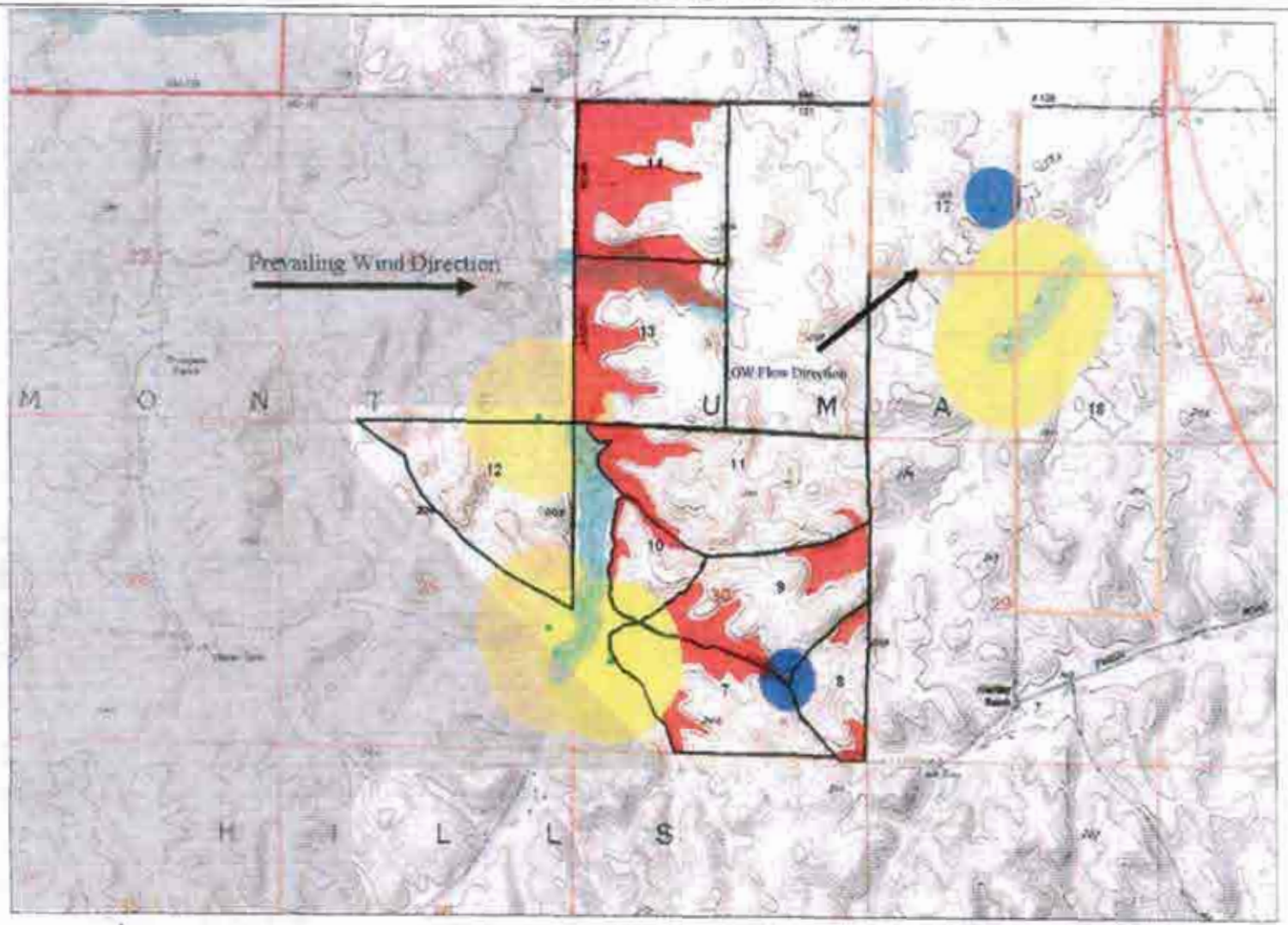
MN (14.4° E)

Regional Map

0 1 2 3 4 5 mi

Data Zoom 10-4

Drawing Reference: DeLorme XMap 5.0 GIS Editor	MAP OF BIOSOLID APPLICATION AND BUFFERS SYNAGRO - HAMILTON FARMS (SO-2) SITE SOLANO COUNTY



Drawing Reference: DeLorme XMap 5.0 GIS Editor	MAP OF BIOSOLID APPLICATION AND BUFFERS SYNAGRO - HAMILTON FARMS (SO-2) SITE SOLANO COUNTY

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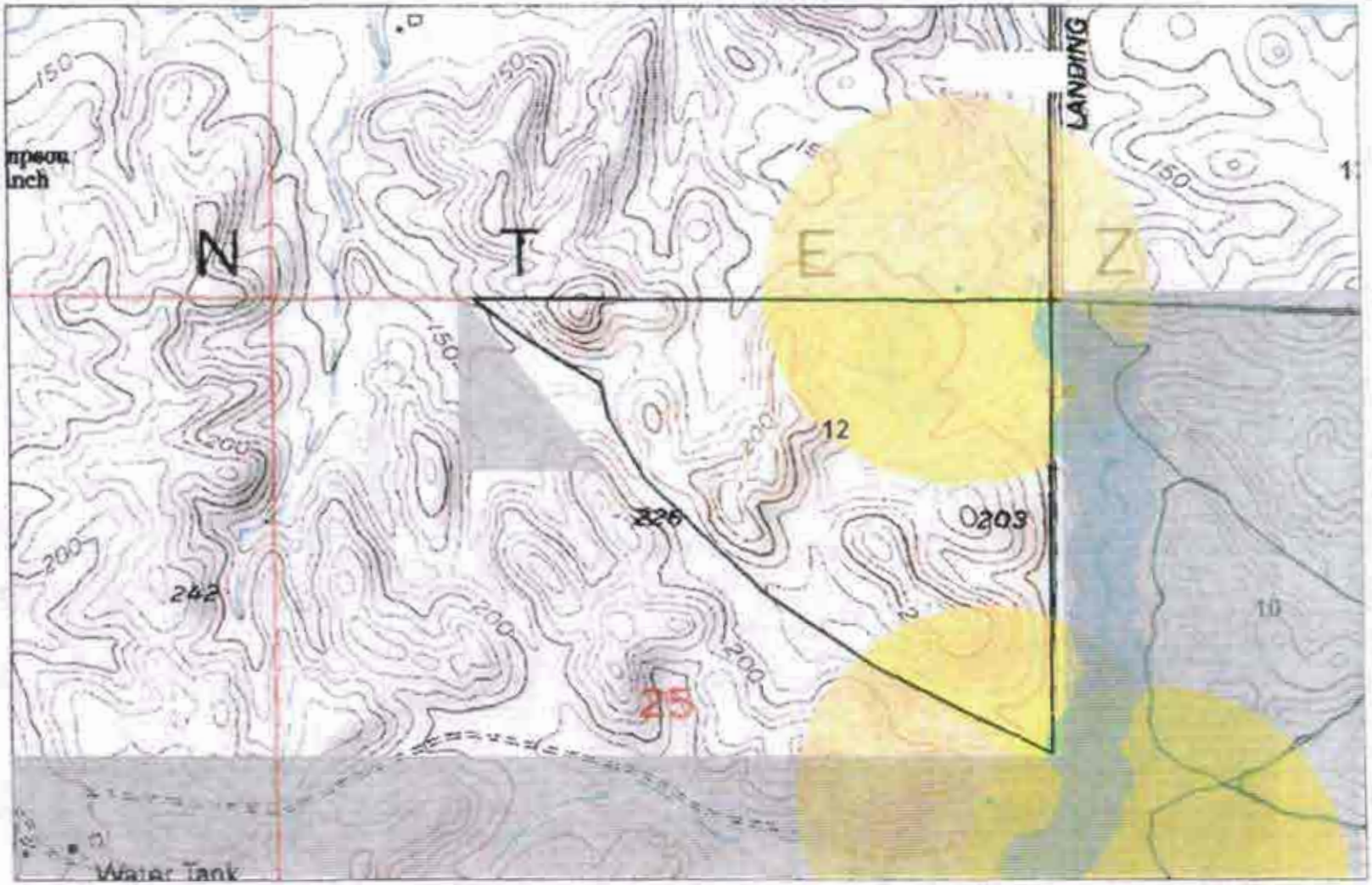
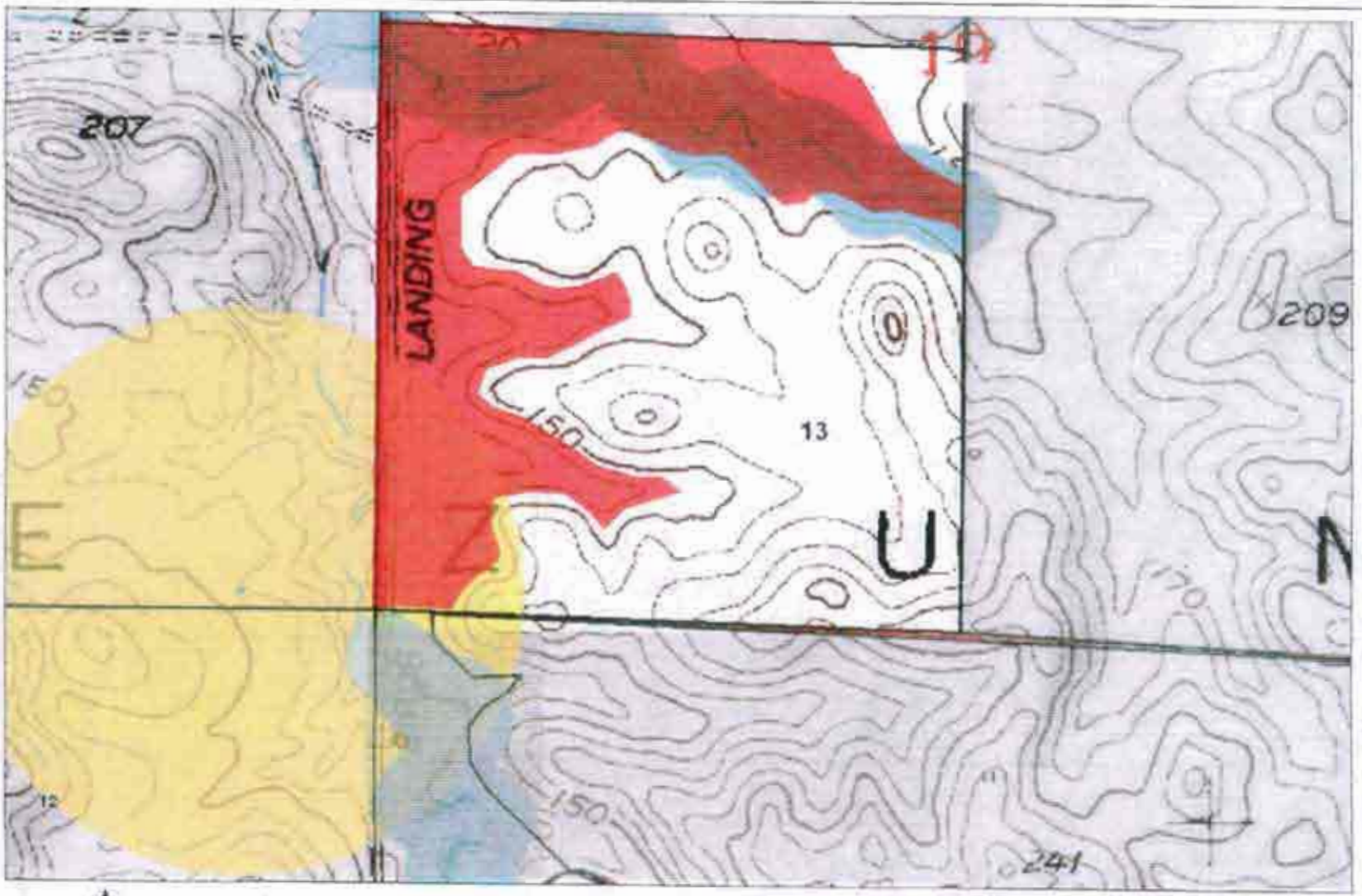


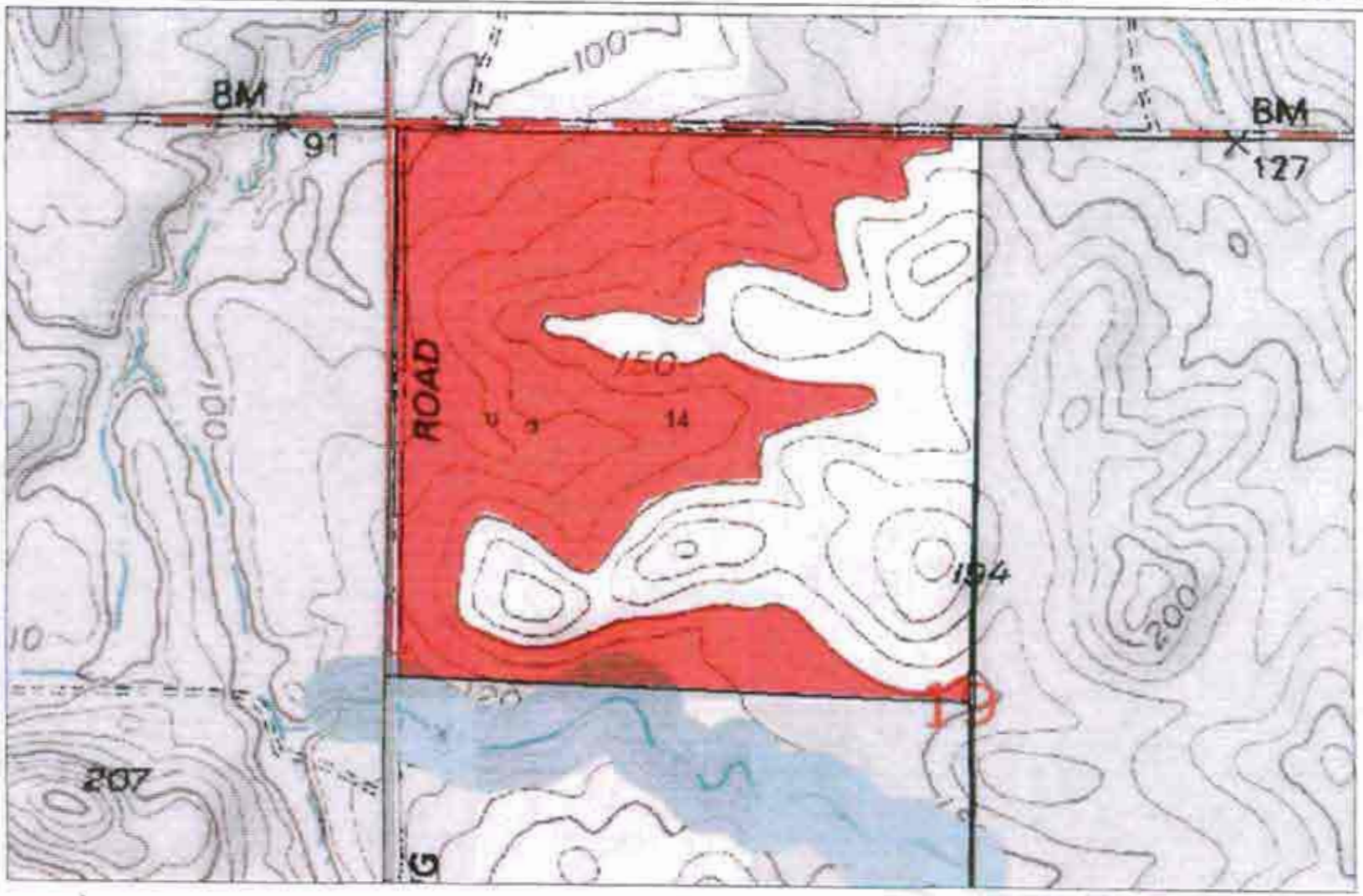
Drawing Reference: DeLorme XMap 5.0 GIS Editor	MAP OF BIOSOLID APPLICATION AND BUFFERS SYNAGRO - HAMILTON FARMS (SO-2) SITE SOLANO COUNTY



SO2-13

Drawing Reference:
DeLorme XMap 5.0 GIS Editor

MAP OF BIOSOLID APPLICATION AND BUFFERS
SYNAGRO - HAMILTON FARMS (SO-2) SITE
SOLANO COUNTY



Drawing Reference: DeLorme XMap 5.0 GIS Editor	MAP OF BIOSOLID APPLICATION AND BUFFERS SYNAGRO - HAMILTON FARMS (SO-2) SITE SOLANO COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2009-0847
FOR
SYNAGRO WEST, INC. AND RICHARD HAMILTON
HAMILTON BROTHERS FARMS (S0-2)
SOLANO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring biosolids and biosolids land application areas. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. This MRP replaces the requirements listed in MRP No. R5-2005-0823, which was issued on 13 June 2005. Specific sampling locations shall be approved by Regional Board staff prior to implementation of sampling activities.

All samples shall be representative of the volume and nature of the material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and electrical conductivity) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

BIOSOLIDS MONITORING

Biosolids from each generator shall be sampled and analyzed as follows. Results for all chemical constituents shall be reported in mg/Kg on a dry weight basis. Composite samples may be used in lieu of grab samples if all required sample holding times are met.

For Generators Using Continuous Sludge Wasting and Disposal and for Pond Cleaning Projects:

Constituent(s)	Sample Type	Sampling Schedule		Reporting Frequency
		Small Generator [1]	Large Generator [2]	
Metals (total) [3]	Grab	1 per six months	1 per 200 dry tons; minimum of 1 per month	Monthly [6]
PCB arochlors, aldrin, dieldrin [4]	Grab	1 per six months	1 per 500 dry tons; minimum of 1 per six months	Monthly [6]
Semi-volatile organics [5]	Grab	1 per six months	1 per 500 dry tons; minimum of 1 per six months	Monthly [6]
Percent moisture	Grab	1 per quarter	1 per 200 dry tons; minimum of 1 per month	Monthly [6]
Total nitrogen	Grab	1 per quarter	1 per 200 dry tons; minimum of 1 per month	Monthly [6]

Constituent(s)	Sample Type	Sampling Schedule		Reporting Frequency
		Small Generator [1]	Large Generator [2]	
Ammonia nitrogen	Grab	1 per quarter	1 per 200 dry tons; minimum of 1 per month	Monthly [6]
Nitrate nitrogen	Grab	1 per quarter	1 per 200 tons; minimum of 1 per month	Monthly [6]
Total phosphorus	Grab	1 per quarter	1 per 200 tons; minimum of 1 per month	Monthly [6]
Total potassium	Grab	1 per quarter	1 per 200 tons; minimum of 1 per month	Monthly [6]

[1] Small generators are those that generate and/or land apply less than 350 dry tons per year (either during a cleanout project or by continuous wasting and disposal).
[2] Large generators are all others.
[3] Include at least the following metals: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.
[4] Using SW 846 Method 8080.
[5] Using EPA Method 8270.
[6] Include analytical data in the monthly monitoring report for the month in which monitoring occurred. For months in which no monitoring takes place, the Monthly Monitoring Report shall so state.

If, for a particular biosolids generator, it can be demonstrated that the generator's biosolids exhibit consistent chemical character over a period of at least two years, the applicable sampling schedule may be reduced by one-half upon written approval of a Biosolids Monitoring Data Summary Report. The report shall contain tabulated analytical data summaries for all biosolids monitoring data for the previous three years.

For Generators with Stockpile Disposal Projects:

Constituent(s)	Sample Type	Number of Samples
Metals (total) [1]	Composite	1 per 200 dry tons; minimum of 1 per month
PCB arochlors, aldrin, dieldrin [2]	Composite	1 per 500 dry tons; minimum of 1 per six months
Semi-volatile organics [3]	Composite	1 per 500 dry tons; minimum of 1 per six months
Percent moisture	Composite	1 per 200 dry tons; minimum of 1 per month
Total nitrogen	Composite	1 per 200 dry tons; minimum of 1 per month
Ammonia nitrogen	Composite	1 per 200 dry tons; minimum of 1 per month
Nitrate nitrogen	Composite	1 per 200 tons; minimum of 1 per month

Constituent(s)	Sample Type	Number of Samples
Total phosphorus	Composite	1 per 200 tons; minimum of 1 per month
Total potassium	Composite	1 per 200 tons; minimum of 1 per month

[1] Include at least the following metals: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.
[2] Using SW 846 Method 8080.
[3] Using EPA Method 8270.

The analytical data shall be presented in the monthly monitoring report(s) for the month(s) in which application of the biosolids occurs. For months in which no application takes place, the Monthly Monitoring Report shall so state.

ROUTINE FIELD MONITORING

The Discharger shall establish and implement an inspection and application oversight program to monitor and control biosolids application rates and ensure compliance with the WDRs. Each discrete application field shall be managed and monitored as follows:

1. Pre-application Oversight:
   a. Identify generator(s) whose biosolids are to be applied.
   b. Define crop to be planted.
   c. Calculate allowable loading rate based on soil nitrogen residual data from the previous fall and most recent plant available nitrogen (PAN) and moisture content data for the generator(s)' biosolids.
   d. Document communication of allowable loading rates to spreader operator.

2. Pre-application Inspection:
   a. Verify that setbacks are clearly delineated.
   b. Verify that runoff controls are in place and functional.
   c. Verify that culverts are blocked (where applicable).

3. Application Oversight:
   a. Verify compliance with setbacks and allowable loading rate.
   b. Verify compliance with soil incorporation requirements.

4. Post-application Oversight:
   a. Confirm with irrigation manager requirements to control runoff for the specified period after application.
   b. Calculate actual biosolids and PAN loading rates.
   c. Note anticipated dates of planting, irrigation, and harvest.

SOIL MONITORING

The Discharger shall establish an annual soil sampling program as follows: two background sampling locations outside of the land application areas (e.g., within application setback areas) and, at least six sampling locations within each discrete land application area identified in the Notice of Applicability. Sampling locations shall be distributed to be representative of each subarea and predominant soil type. Soil samples shall be collected from each sampling location at the following depth intervals: 0 to 1 foot, 2 to 3 feet, and 5 to 6 feet below the ground surface. Each 12-inch sample shall be thoroughly mixed to create a composite sample representative of the depth interval, and shall be analyzed as follows:

Constituent/Parameter	Units	Sampling and Reporting Frequency [3]
Soil Classification (USCS and USDA)	--	Annually
Total Solids	% total weight	Annually
Total Alkalinity [1]	mg/Kg as $CaCO_3$	Annually
Cation Exchange Capacity [1]	meq/100 grams	Annually
Electrical Conductivity	mg/Kg, mg/L	Annually
Chloride [2]	mg/L	Annually
Iron [2]	mg/L	Annually
Manganese [2]	mg/L	Annually

1 To be reported on a dry weight basis; show calculations.
2 Analysis shall be performed on the extract obtained from the Waste Extraction Test using distilled water as the extractant.
3 Samples shall be collected in the fall (fourth quarter). Sampling must occur at the same time each year.

Soil pH shall be monitored in accordance with the approved Land Productivity Evaluation Report.

GROUNDWATER MONITORING

Prior to any future submittal of a Notice of Intent or Report of Waste Discharge, the Discharger shall install groundwater monitoring wells and conduct 12 quarters samples for its statistical evaluation of water quality. The groundwater quality evaluation is necessary for an antidegradation analysis. The number and location of the monitoring wells should be established in such a way to establish the groundwater flow direction, and groundwater quality upgradient and downgradient of each of the biosolids application areas.

Prior to construction of any groundwater monitoring wells, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan to the Central Valley Regional Board for review and approval. Once installed, all new wells shall be added to the MRP, and all wells shall be sampled and analyzed according to the schedule below.

Prior to sampling, groundwater elevations shall be measured, and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. Samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Depth to groundwater	0.01 feet	Measurement	Quarterly
Groundwater elevation [1]	0.01 Feet	Calculated	Quarterly
Gradient magnitude	feet/feet	Calculated	Quarterly
Gradient direction	Degrees	Calculated	Quarterly
pH	std.	Grab	Quarterly
Total dissolved solids	mg/l	Grab	Quarterly
Nitrate nitrogen	mg/l	Grab	Quarterly
Ammonia nitrogen	mg/l	Grab	Quarterly
Total coliform organisms	MPN/100 ml	Grab	Quarterly
Standard minerals [2]	mg/l	Grab	Annually
Metals [3]	ug/L	Grab	Annually

1 Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

2 Standard Minerals shall include, at a minimum, the following elements/compounds: calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

3 Metals shall include arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form using the format provided in the example tables, which are part of this MRP, or in another approved format so that the date, sample type (e.g., biosolids, soil, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed and stamped by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following the end of the monitoring period** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. A scaled site map depicting each discrete field, property boundaries, roads, on-site structures, surface water bodies, drainage features, and runoff controls (as applicable);
2. The results of biosolids monitoring for each generator whose waste was applied to land during the month. Specifically, tabulated data for each generator shall be provided using the attached Biosolids Monitoring Results form (or approved revision thereof). Laboratory analytical reports need not be included, but must be provided upon request.
3. The results of routine field monitoring. Specifically, tabulated information for each discrete application field used during the month shall be provided using the attached Field Monitoring Results form (or approved revision thereof).
4. For each biosolids generator and discrete application field, a comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements.
5. If no biosolids were applied during the month, a letter report certifying that fact.

B. Annual Report

An Annual Report shall be prepared and submitted to the Regional Board by **1 February** each year. The Annual Report shall include the following:

1. The monthly monitoring report for the last month of the calendar year.
2. For each biosolids generator, a summary of all analytical data and verification of compliance with the biosolids monitoring requirements. Include all Biosolids Monitoring Results forms.
3. For each discrete application field, a chronological log of dates of biosolids application, irrigation, precipitation, and runoff control operations. Specifically, tabulated information for each discrete application field shall be provided using the attached Field Activities Summary form (or approved revision thereof).
4. For each discrete application field:
   a. Total cumulative metals loading rates as of the end of the previous calendar year;
   b. Calculation of the total metals and nitrogen loading rates for the year;
   c. The cumulative metals loading rates since biosolids land application began; and
   d. The cumulative metals loading rates to date as a percentage of the cumulative metals loading limits.
5. A report of soil monitoring, including:
   a. Sampling and analysis activities, including a scaled map of sampling locations;
   b. Tabulation of all soil analytical results;

c. Historical time vs. concentration plots for each constituent at each sampling interval;

d. A discussion of any observed spatial or temporal variation; and

e. Whether pH adjustment is needed and, if so, how and when the adjustment will be made.

6. A groundwater monitoring summary report including:

a. The contents of the regular groundwater monitoring report for the last sampling event of the year;

b. If requested by staff, tabular and graphical summaries of all data collected during the year;

c. An evaluation of the groundwater quality beneath the site;

d. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;

e. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program; and

f. The results for groundwater analyses that are performed annually.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall clearly indicate the Discharger's name, facility or site name, county, monitoring period, and type of report (i.e., monthly, quarterly, or annual). The letter shall include a discussion of any requirement violations during the reporting period and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to the Standard Provisions and Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge, the report is true, accurate, and complete.

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

Ordered by: Pamela C Creedon

PAMELA C. CREEDON, Executive Officer

August 18, 2009

(Date)

Attachments: Biosolids Monitoring Results form
Monthly Field Monitoring Results form
Annual Field Activities Summary form

BIOSOLIDS MONITORING RESULTS

Generator Information

Owner Name _____

Facility Name _____

RWQCB Region _____

County _____

NPDES Permit No. _____

WDRs Order No. _____

Project Information

Project Type _____ Pond cleanout _____ Continuous wasting/drying
_____ Drying bed cleanout _____ Stockpile Disposal

Estimated Project Duration _____ to _____

Estimated Total Mass [4] _____ dry tons this calendar year

Required EPA Certification Frequency _____

Stabilization Method _____

Pathogen Reduction Method [8] _____

Vector Attraction Reduction Option [9] _____

Sampling Information

[1] Lab Sample ID						
[2] Sampler's Sample ID						
[3] Sampler						
Sample Date						
Analysis Date						

Analytical Result

	Wet Basis	Dry Basis	Wet Basis	Dry Basis	Wet Basis	Dry Basis	Wet Basis	Dry Basis	Wet Basis	Dry Basis	Wet Basis	Dry Basis
Fecal coliform, MPN/g												
Total solids, percent												
Total nitrogen, mg/Kg												
Ammonia nitrogen, mg/Kg												
Nitrate nitrogen, mg/Kg												
Total phosphorus, mg/Kg												
Total potassium, mg/Kg												

Nitrogen Loading Rate

[5] Mineralization rate, percent												
[6] Volatilization factor, percent												
[7] Units conversion factor												
PAN, lbs/ton												

Footnotes

[1] Sample ID assigned by the analytical laboratory.

[2] Sample ID from chain of custody form.

[3] Specify whether sampling was performed by Synagro or generator/generator's contractor.

[4] Estimated mass to be land applied at this site.

[6] Equals 50% for surface application; 100% for subsurface injection.

[7] Equals 0.002 lbs/ton per mg/Kg.

[8] Specify in detail. For example: "Class B - anaerobic digestion for ___ to ___ days at ___ to ___ degrees F (range for past month)".

[9] Specify in detail. For example: "Option 1 - volatile solids reduction greater than 38%; VS in = ___, VS out = ___".

OWNER NAME _____
FACILITY NAME _____

[5] Equals 20% for aerobically digested; 30 % for aerobically digested, 25 % for aerobically/anaerobically digested; 40% for lime-stabilized.

Sampling Information

[1] Lab Sample ID			
[2] Sampler's Sample ID			
[3] Sampler			
Sample Date			
Analysis Date			

Metals Analyses

	Wet Basis	Dry Basis	Wet Basis	Dry Basis	Wet Basis	Dry Basis
Arsenic, mg/Kg						
Cadmium, mg/Kg						
Copper, mg/Kg						
Lead, mg/Kg						
Mercury, mg/Kg						
Molybdenum, mg/Kg						
Nickel, mg/Kg						
Selenium, mg/Kg						
Zinc, mg/Kg						

Semi-volatile organic compounds, detections only (mg/Kg)

PCBs/aldrin/dieldrin, detections only (mg/Kg)

Regulatory Limits				
40 CFR 503 (dry wt. basis)		22 CCR (wet wt. basis)		
mg/Kg	mg/Kg	mg/L	mg/L	mg/K
Table 1	Table 3	STLC	10 x STLC	TTL
75	41	5	50	500
85	39	1	10	100
4,300	1,500	25	250	2,500
840	300	5	50	1,000
57	17	0.2	2.0	20
75		350	3,500	3,500
420	420	20	200	2,000
100	36	1	10	100
7,500	2,800	250	2,500	5,000

OWNER NAME _____
FACILITY NAME _____

MONTHLY FIELD MONITORING RESULTS

Month _____ Year _____

Field Information

Field ID No					
Gross Acreage					
Net Acreage					
Crop					
Anticipated Planting Date					
Anticipated Harvest Date					
Anticipated Irrigation Date(s)					
Next Allowable Runoff Date					

Source Information

Source ID Code	Owner Name	Facility Name

Biosolids Application Information (tonnage per field)

Day of Month	Source ID	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
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21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

Total Application (tons)									
Application Rate (tn/ac)									
PAN Application (lb)									
PAN Rate (lb/ac)									
Phosphorus Rate (lb)									
Phosphorus Rate (lb/ac)									
Potassium Rate (lb)									
Potassium Rate (lb/ac)									

ANNUAL FIELD ACTIVITIES SUMMARY

Year ________ Field ID Number ________________

Gross Acreage ____________
Net Acreage ____________
Crop ____________
Actual Planting Date ____________
Actual Harvest Date ____________

Month	Date	Biosolids Applied		PAN Applied	P Applied	K Applied	Irrigation		Precipitation	Runoff Control Status
		wet tn	dry tn	tn/ac	tn/ac	tn/ac	gallons	inches	inches	

ANNUAL FIELD ACTIVITIES SUMMARY

Year ________ Field ID Number ______________

Gross Acreage ________
Net Acreage ________
Crop ________
Actual Planting Date ________
Actual Harvest Date ________

Month	Date	Biosolids Applied		PAN Applied	P Applied	K Applied	Irrigation		Precipitation	Runoff Control Status
		wet tn	dry tn	tn/ac	tn/ac	tn/ac	gallons	inches	inches	

ANNUAL FIELD ACTIVITIES SUMMARY

Year _____ Field ID Number _____

Gross Acreage _____
Net Acreage _____
Crop _____
Actual Planting Date _____
Actual Harvest Date _____

Month	Date	Biosolids Applied wet tn	Biosolids Applied dry tn	PAN Applied tn/ac	P Applied tn/ac	K Applied tn/ac	Irrigation gallons	Irrigation inches	Precipitation inches	Runoff Control Status
Totals										