

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427**

ORDER NO. 96-30

**WASTE DISCHARGE REQUIREMENTS
FOR
SLICK GARDNER
CITY OF BUELLTON AND CITY OF SOLVANG
GARDNER RANCH BIOSOLIDS APPLICATION SITE
SANTA BARBARA COUNTY**

The California Regional Water Quality Control Board, Central Coast Region, (hereafter Board), finds:

1. Mr. Slick Gardner, P.O. Box 277, Buellton, CA 93427, owns and operates the Gardner Ranch (hereafter Ranch). Since July 7, 1989, biosolids have been discharged to the Ranch subject to Order No. 89-78, "Waste Discharge Requirements for Sludge Application, City of Santa Barbara, Buellton Community Services District, Montecito Sanitary District, Slick Gardner and Richard Costa Properties, Santa Barbara County".
2. The City of Santa Barbara and the Montecito Sanitary District have submitted written notice to the Board that they no longer intend to discharge biosolids at the Ranch pursuant to Order No 89-78. Biosolids application on the Richard Costa Property was discontinued as a result of Cleanup or Abatement Order No. 92-132. The City of Solvang was allowed by the Executive Officer to land apply biosolids at the Ranch shortly after adoption of Order No. 89-78. As a result, the Cities of Buellton and Solvang have the only wastewater treatment plants permitted to discharge biosolids on the Ranch.
3. One hundred acres of the 1600 acre Ranch are suitable for biosolids application within the Biosolids Application Site indicated on Attachment A of this Order. Biosolids amended soils are used for growing oats, alfalfa, bermuda grass, barley, and/or lima beans for seed. The Gardner Ranch is on moderately sloping topography with fine sandy loam soils (ref.: USDA Soil Survey for the northern Santa Barbara Area, 1972). The depth of the ground water is approximately 200 feet. The biosolids spreading site(s) are located approximately 1000 feet from the Santa Ynez River (see Attachment A). The Ranch is located between Buellton and Solvang in Sections 18 and 20, T6N, R31W. Slick Gardner, the City of Solvang and the City of Buellton, individually and collectively are referred to as "Discharger".
4. The Cities of Buellton and Solvang haul 1050 cubic yards/year of treated biosolids to the Ranch. Buellton's biosolids are treated using a biosolids concentrator and drying beds. Solvang's biosolids are treated with drying beds.
5. The Water Quality Control Plan, Central Coastal Basin, (Basin Plan) was adopted by the Board on September 14, 1990, and approved by the State Water Resources Control Board on January 24, 1991. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.
6. Present and anticipated beneficial uses of ground water in the vicinity of the vicinity of the discharge include:
 - a. Domestic and Municipal Supply;
 - b. Agricultural Supply; and
 - c. Industrial Supply

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7. Present and anticipated beneficial uses of the Santa Ynez River that could be affected by the discharge include:
 - a. Domestic and municipal supply;
 - b. Warm fresh-water habitat;
 - c. Agricultural supply;
 - d. Wildlife habitat;
 - e. Water contact recreation;
 - f. Fish migration; and
 - g. Non-contact water recreation;
 - h. Fish spawning; and
 - i. Groundwater recharge
8. This site is exempt from criteria of the California Code of Regulation, Title 23, Division 3, Chapter 15, pursuant to Section 2511 (f), since this is a use of nonhazardous decomposable waste as a soil amendment.
9. This project involves biosolids application by using biosolids as a soil amendment. As such, this project is exempt from the provisions of the California Environmental Quality Act in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15304.
10. Discharge of waste is a privilege, not a right, and authorization to discharge is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure this and mitigate any potential adverse changes in water quality due to the discharge.
11. The United States Environmental Protection Agency (EPA) has promulgated biosolids refuse regulations in *40 CFR 503, Standards for the Use or Disposal of Sewage Sludge*, (503 regulations). These regulations establish management criteria for the protection of ground and surface waters, set application and cumulative loading rates for heavy metals, and establish stabilization and disinfection criteria. Some standards in the 503 regulations are used in this Order, however the Board is not the implementing agency for the 503 regulations. Currently, the EPA is the only agency with authority to implement the 503 regulations. The Discharger may have permitting, reporting and other compliance responsibilities with the EPA. Compliance with this Order does not necessarily constitute compliance with the 503 regulations.
12. State Department of Health Services prepared a "Manual of Good Practice for Landspreading of Sewage Biosolids" dated April 1983. Portions of this Order are based on the Manual of Good Practice.
13. On June 7, 1996, the Board notified the Discharger, interested agencies, and persons of the Boards intent to revise waste discharge requirements for the discharge and has provided them with a copy of the proposed order and an opportunity to submit written views and comments.
14. After considering all comments pertaining to this discharge during a public hearing on October 18, 1996, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, the City of Buellton, the City of Solvang, Mr. Slick Gardner, their agents, successors, and assigns, may discharge biosolids at the Gardner Ranch providing compliance is maintained with the following:

(Note: other prohibitions and conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984. Applicable paragraphs are referenced in paragraph D.2 of this Order.)

(Throughout this Order, superscripted footnotes are listed to indicate the sources of requirements as follows:

- a=California Water Code
- b=CCR, Title 22
- c=Manual of Good Practice
- d=40 CFR 503 (the 503 regulations)

A. Prohibitions

1. Discharge to areas other than Designated Biosolids Application Site shown on Attachment A, is prohibited.^a
2. Discharge of biosolids or any waste to surface waters or surface water drainage courses to adjacent properties is prohibited.^a
3. Discharge of wastes other than nonhazardous and nondesignated treated municipal biosolids from the City of Buellton or the City of Solvang is prohibited. Biosolids discharged in compliance with this Order are not considered designated waste.^b
4. Discharge of biosolids to adjacent properties is prohibited.

B. Application Specifications

1. The daily biosolids discharge from the Cities of Buellton and Solvang averaged over a 30-day period shall not exceed 5.75 cubic yards.

2. The discharge shall not contain constituent concentrations in excess of the following:

Constituent	Dry Weight Concentration mg/Kg ^d
Lead	500
Cadmium	25
Polychlorinated Biphenyls (PCBs)	5

3. Biosolids discharged to application sites shall not have a pH less than 6.5 or greater than 8.4.
4. Maximum cumulative application of heavy metals to the sites shall not exceed the following:

	Soil Cation meq/100g	Exchange Capacity	Capacity
	0-5	5-15	>15
Metal	Maximum cumulative metal addition, kg/ha ^c		
Zinc	250	500	1000
Copper	125	250	500
Nickel	50	100	200
Lead	400	800	800
Cadmium	5	10	20

5. The annual cadmium application rate shall not exceed 0.5 kilograms per hectare (kg/ha) (0.45 lbs/acre).^c
6. The nitrogen application rate (lbs N/acre/day or month or year or crop cycle) shall not exceed nitrogen removal rates of crops grown in the biosolids application sites.^a
7. Biosolids shall be applied only to land used for growing fodder, fiber, and seed crops. Crops used for animal feed shall not be consumed by milking animals.^c
8. Biosolids shall not be applied to any area within 500 feet of domestic water supply wells and private residences, and no closer than 100 feet from adjacent drainageways or irrigation wells.

9. Biosolids applied to the land must be tilled into the soil within 48 hours of its application.^c Areas used for onsite biosolids storage must have prior written approval by the Executive Officer. Onsite storage will be discouraged due to potential nuisance conditions and increased potential of effecting water quality.
10. Biosolids shall not be applied to water saturated ground or applied during periods of rainfall.
11. Transportation, storage and application of biosolids shall be done in such a manner that nuisance conditions do not develop.^a
12. Upgradient runoff from storms of up to a 100-year, 24-hour intensity shall be diverted away from the designated biosolids application site.
13. After active use of the site is completed or after seasonal harvesting (if applicable), these precautions shall be followed:^c
 - (a) Public access shall be prevented for at least 12 months.
 - (b) Grazing by animals whose products are consumed by humans shall be prevented for at least one month after biosolids application.
 - (c) If a pasture is subsequently converted into a dairy pasture, grazing by milking animals shall be prevented for at least 12 months after biosolids application. Where the milk is unpasteurized, no grazing shall be allowed.
 - (d) Unprocessed food crops shall not be planted for at least three years after biosolids application.

C. Ground Water Limitations

1. The discharge shall not cause nitrate concentrations in the groundwater downgradient of the biosolids application site to exceed 8 mg/l (as N).^a

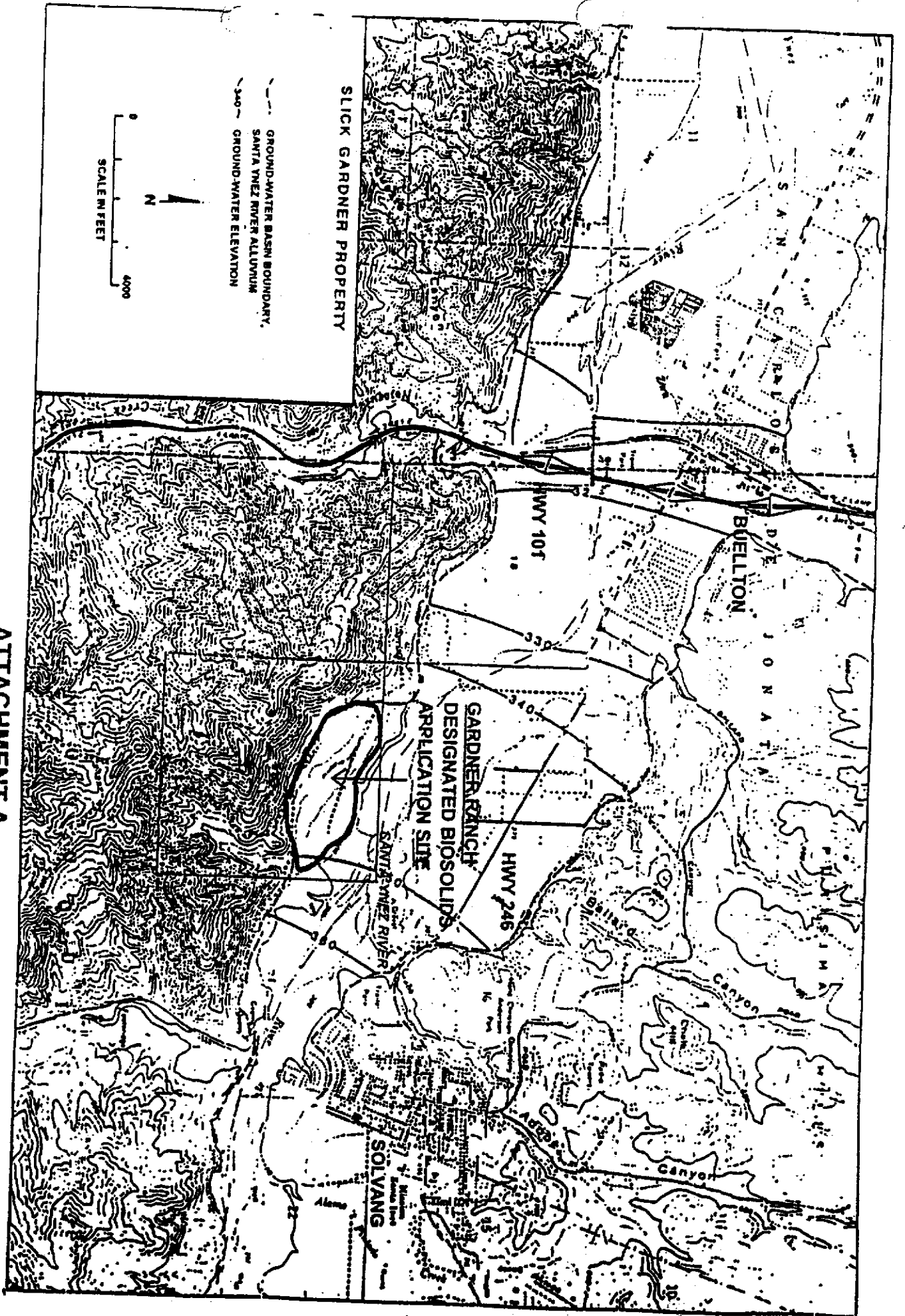
2. The discharge shall not cause a significant increase of mineral constituent concentrations in underlying ground waters, as determined by comparison of samples collected from wells located upgradient and downgradient of the biosolids application sites.
3. The discharge shall not cause concentrations of chemicals and radionuclides in groundwater to exceed limits set forth in Title 22, Chapter 15, Article 4 and 5 of the California Code of Regulations.

D. Provisions

1. Order No. 89-78, "Waste Discharge Requirements for Sludge Application City of Santa Barbara, Buellton Community Services District, Montecito Sanitary District, Slick Gardner and Richard Costa Properties, Santa Barbara County", adopted by the Board on July 7, 1989, is hereby rescinded.
2. Discharger shall comply with "Monitoring and Reporting Program No. 96-30," as specified by the Executive Officer.^{c,d}
3. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated January, 1984, specifically Items. A.2, A.3, A.7, A.9, A.10, A.14, A.16, A.18, A.19-23, A.25, A.26, B.1, B.3-7, C.1-7, C.10-18, E.1-3, and F.1-19.
4. The Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge or of subsequent use of the land for other purposes.
5. The Cities of Buellton and Solvang shall enter into a contractual arrangement with Slick Gardner to assure all parties understand their specific roles and responsibilities resulting from discharging biosolids pursuant to this Order. A copy of the agreement shall be submitted to the Executive Officer by November 1, 1996. The submittal shall include how a record of biosolids application

on the Ranch will be brought to the attention of future prospective owners or during consideration of other land uses (e.g., recording with the County). The final agreement is subject to concurrence of the Executive Officer.

6. Discharger shall inform personnel involved in producing, transporting, or using biosolids, of possible health hazards that may result from contact and use of biosolids.
7. Pursuant to Section 13263(e) of the California Water Code, the Discharger shall submit a written report to the Executive Officer not later than April 1, 2006, addressing:
 - (a) Whether there has been or will be changes in the continuity, character, location, or volume of the discharge; and,
 - (b) whether, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.



ATTACHMENT A

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

**MONITORING AND REPORTING PROGRAM NO. 96-30
FOR SLICK GARDNER
CITY OF BUELLTON AND THE CITY OF SOLVANG
GARDNER RANCH BIOSOLIDS APPLICATION SITE
SANTA BARBARA COUNTY**

BIOSOLIDS MONITORING

Samples shall be collected by the Discharger prior to sending the biosolids to the Gardener Ranch. Samples shall be collected from the last point in the biosolids handling process where representative samples of residual solids from the treatment process can be obtained and analyzed for the following parameters at the frequencies specified below:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Quantity Applied	Cubic yards & kilograms	Measured	Daily
Quantity Applied	Cubic yards & kilograms	Calculated	Monthly
Location of Application	Site	--	Daily
Type of Crops Grown	--	--	Semi-Annual
Percent Solids	%	Grab	**
Nitrogen			
Ammonia	mg/kg*	Grab	**
Nitrate	mg/kg*	Grab	**
Total Kjeldahl	mg/kg*	Grab	**
Oil & Grease	mg/kg*	Grab	**
Phosphorus	mg/kg*	Grab	**
pH	pH units	Grab	**
Boron	mg/kg*	Grab	**
Arsenic	mg/kg*	Grab	**
Cadmium	mg/kg*	Grab	**
Chromium	mg/kg*	Grab	**
Copper	mg/kg*	Grab	**
Lead	mg/kg*	Grab	**
Mercury	mg/kg*	Grab	**
Molybdenum	mg/kg*	Grab	**
Nickel	mg/kg*	Grab	**
Selenium	mg/kg*	Grab	**
Silver	mg/kg*	Grab	**
Zinc	mg/kg*	Grab	**
Fecal Coliform or <i>Salmonella</i> sp.	MPN/gram dry weight	Grab	**
Polychlorinated Biphenyls (PCBs)	mg/kg	Grab	**

* To be reported as dry weight basis.

** Samples to be collected and analyzed a minimum of once per year, or once per thousand cubic yards of land applied biosolids, whichever is more frequent.

SITE METAL ACCUMULATION AND SOIL ANALYSIS

The cumulative metals loading rates (kilograms per hectare or pounds per acre) (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc) discharged to each Field shall be calculated and reported annually by the Discharger. As part of this report, Discharger shall divide the Designated Biosolids Application Sites used for land spreading into Fields of no larger than 50 acres each. Representative samples of soil from each Field shall be collected and analyzed annually for Cation Exchange Capacity (milliequivalents per 100 grams of soil), pH, Cadmium, Lead, and total Nitrogen. Soil shall be sampled at the depth of cultivation or biosolids placement, whichever is greater.

APPLICATION RATES

The metals application rate (kg metal/ ha or lbs metal/acre) and the nitrogen application rate (kg N/ha or lbs N/ac) shall be calculated for each Field (see above) by the Discharger and reported in the annual report. In reporting the nitrogen application rate, a comparison shall be made with the nitrogen removal rates of crops grown on each Field.

GROUND WATER MONITORING

Samples of ground water shall be collected from each of the ground water monitoring wells required by the Order. After the ground water depth has been measured, each well shall be purged and sampled. Samples shall be collected and analyzed for each of the following:

Parameter	Units	Type of Sample	Minimum Frequency of Sampling and Analysis
Depth of Ground Water	feet	Measured	Semi-Annual (Sept. and March)
Ground Water Gradient and Direction		Measured	"
Nitrate Nitrogen (as N)	mg/l	Grab	"
Total Dissolved Solids	mg/l	Grab	"
Sodium	mg/l	Grab	"
Chloride	mg/l	Grab	"
Sulfate	mg/l	Grab	"
Boron	mg/l	Grab	"
pH	mg/l	Grab	"
Iron	mg/l	Grab	"
Total Organic Carbon	mg/l	Grab	"
Cadmium	mg/l	Grab	"
Copper	mg/l	Grab	"
Chromium (Total)	mg/l	Grab	"
Lead	mg/l	Grab	"
Nickel	mg/l	Grab	"
Mercury	mg/l	Grab	"
Silver	mg/l	Grab	"
Zinc	mg/l	Grab	"

BIOSOLIDS APPLICATION SITE INSPECTIONS

The Discharger shall perform monthly inspections of the Designated Biosolids Application Site. Additional inspections during wet-weather shall be performed as appropriate. During the inspections, the inspector shall note compliance status with this Order and any necessary corrective measures. A log of all inspections shall be maintained by Slick Gardner. A summary of the inspection findings shall be reported in the semi-annual reports along with a certification that crops grown are not being consumed by humans or milking animals.

REPORTING

The Discharger shall submit **semi-annual** monitoring reports on the **20th of April and October**. An **annual report** is due on the **20th of April** and may be combined with the semi-annual report due on the same date. Reports shall include the following:

1. tabulation and interpretation of all sampling data;
2. water quality and soil analysis data sheets from a certified laboratory;
3. determination of the velocity and direction of ground water flow beneath each field that has received biosolids;
4. documentation of any deviation from the approved sampling and analysis plan; and
5. the annual report shall include an operational summary for the previous year and a farm operations plan for the current year.

Copies of all reports shall be submitted to the Director of the Santa Barbara County Health Care Services.

ORDERED BY



for Executive Officer

Date

10/21/96
