

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION

ORDER NO. 89-035

WASTE DISCHARGE REQUIREMENTS  
FOR  
BIO GRO SYSTEMS, INC.  
Colorado Hydrologic Unit - Riverside County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Bio Gro Systems, Inc. (hereinafter also referred to as the discharger), 1916 Forest Drive, Annapolis, MD 21401, submitted a Report of Waste Discharge, dated January 23, 1989, to operate a program for beneficial agricultural use of sewage sludge.
2. The discharger proposes to utilize stabilized wastewater treatment plant sludge through agricultural land application at agronomic rates. The plan of operation has been formulated to meet anticipated requirements of this Regional Water Quality Control Board and Guidelines contained in the "Manual of Good Practice for Landspreading of Sewage Sludge" Department of Health Services, Sanitary Engineering Branch, April 1983.
3. Air dried sludge and mechanically de-watered digested (stabilized) sludge would be handled as a bulk material using dump trucks and loaders. Sludge would be transported to designated land application sites and stock piled for spreading. Field stockpiling would be restricted to limited time durations to prevent nuisances and to eliminate the potential for water pollution. Sludge would be applied with a box-type spreader and the applied material would be soil-incorporated within 24 hours with tillage equipment. Incorporation would be done directly by the discharger. A sludge management plan for each field would be submitted to the Regional Board prior to any sludge application thereon.
4. The discharger states that sludge will be transported by semi-dump trailers. These units would be in good condition and would be equiped with water-tight end gates. A manifest system would be maintained whereby the date, time, quantity, source and destination of each load would be recorded. Such records would provide one of the bases for the monitoring program.
5. The crops under consideration for sludge application would include bermuda grass, small grain, sugar beets, alfalfa and cotton. Sludge will not be applied to produce crops such as lettuce due to California and Federal food chain crop restrictions, where resting periods are mandated when a crop in direct contact with soil is consumed raw.

6. The discharger's report of waste discharge was for the Riverside County portions of the Colorado Hydrologic Unit.
7. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted by the Board on November 14, 1984. The subject sludge application sites occur within the Colorado Hydrologic Unit. The beneficial uses of ground waters of the Colorado Hydrologic Unit are:
  - a. Municipal supply
  - b. Industrial supply
  - c. Agricultural supply
8. The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements for the discharge.
9. The Board in a public meeting heard and considered all comments pertaining to the existing discharge.
10. In accordance with CEQA, the Regional Board, acting as lead agency, processed and approved Negative Declaration SCH # 89031307.

IT IS HEREBY ORDERED, the discharger shall comply with the following:

A. Discharge Specifications

1. The discharge operations shall not create pollution or nuisance as defined in Division 7 of the California Water Code.
2. Land application of the sludges shall be done at agronomic rates and be limited to agricultural sites in the Riverside County portion of the Colorado Hydrologic Unit. Land application shall be restricted to sources of sludge(s) receiving prior written approval by the Executive Officer of this Regional Board. The following factors will be used to determine land application suitability:
  - a. Single application and lifetime limits of all constituents as described in both 40 CFR Part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices, U.S.E.P.A., September 1979, and "Manual of Good Practice for Landspreading of Sewage Sludge", California Department of Health Services, Sanitary Engineering Branch, April 1983.

- b. Soil Cation Exchange Rate
- c. Soil pH
- d. Nitrogen Loading Rates
- e. Phytotoxicity

Also, the land application suitability will be continually reviewed as new data is received.

3. Sludge request forms signed by both the farm operator and the land owner shall be submitted to the Regional Board as an informational item stating the crops intended to be grown on the subject acreage, in accordance with the "Manual for Good Practice for Landspreading of Sewage Sludge", California Department of Health Services Sanitary Engineering Branch, April 1983.
4. All landspreading practices shall be in compliance with 40 CFR Part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices, U.S.E.P.A., and the "Manual of Good Practice for Landspreading of Sewage Sludge", Department of Health Services, Sanitary Engineering Branch, April 1983.
5. Sludge shall be applied only one time per harvested crop in accordance with the design for any given site and the sludge for any given site and the sludge management plan.
6. Sludge shall be landspread and incorporated within 24 hours of arrival on the site.
7. Sludge shall not be applied on areas exceeding 4 percent in slope.
8. Sludge stock piles will be limited to approved sites in accordance with Department of Health Services guidelines; and stock piles shall not be located in the following locations:
  - a. 25 feet from property lines unless permission is obtained from the adjacent landowner.
  - b. 500 feet from drinking water wells.
  - c. 50 feet from public roads.
9. The discharger shall submit to the Regional Board an annual screening test which shall include all metals and organics that are prescribed by the California Assessment Manual on all sludge sources which the discharger intends to use as soil amendments. In addition, the discharger shall submit to the Regional Board monthly results of analyses of sludge tested at the wastewater treatment plant, showing the following: (Documented treatment plant results may be permitted.)

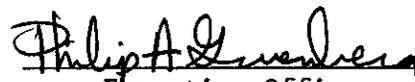
<u>Determination</u>	<u>Unit</u>
a. Arsenic	mg/kg
b. Chromium	mg/kg
c. Cadmium	mg/kg
d. Lead	mg/kg
e. Zinc	mg/kg
f. Copper	mg/kg
g. Nickel	mg/kg
h. Mercury	mg/kg
i. Selenium	mg/kg
j. Total Nitrogen	%
k. Plant Available Nitrogen	lbs/dry ton
l. Solids	%

10. The discharger shall report to the Regional Board (informational purposes only), for a period of 3 years after the last sludge application to a particular field, what crops are being grown on that field. The reported crops shall conform to those allowed under Discharge Specification No. 2, above.
11. This Order does not authorize any applicable violations of laws and regulations of any other federal, state or local agencies.
12. Sampling techniques for CAM testing shall be done in accordance with Section 1 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" SW-846, 2nd Edition, U.S.E.P.A. 1982.
13. If the discharger is proposing to apply sludge to a field from which tailwater may enter any surface waters, the discharger shall obtain a written prior approval from the Executive Officer for sludge application and additional applicable monitoring requirements.

B. Provisions

1. The discharger shall comply with "Monitoring and Reporting Program No. 89-035" and future revisions thereto, as specified by the Executive Officer.
2. Prior to any material modifications in any aspect of the sludge management plan, the discharger shall report in writing to the Regional Board allowing sufficient time for Board consideration and action.
3. This waste discharge requirement shall immediately be subject to review and revision when the U. S. Environmental Protection Agency issues any technical criteria regulations or guidance affecting sludge disposal currently being developed under authorities provided under Section 405(d) for the Clean Water Act.

I, Phil Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 17, 1989.

  
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 89-035  
FOR  
BIO GRO SYSTEMS, INC.  
Colorado Hydrologic Unit - Riverside County

MONITORING

- I. The discharger shall submit to the Regional Board monthly reports as follows:
  - A. Soil samples shall be collected prior to each sludge application and analyzed for:
    1. pH
    2. Cation Exchange Capacity
    3. Lead
    4. Cadmium
    5. Copper
    6. Zinc
    7. Nickel
    8. Selenium
  - B. Samples shall be collected monthly from the sludge applied to each field and the following shall be reported monthly to the Regional Board.
    1. Number of tons applied that month, number of tons of sludge applied to the field total and crop to be grown.
    2. Pounds per acre of copper, zinc, cadmium, nickel and lead that has been applied that month, pounds per acre that have been applied of each metal in the lifetime of the field and theoretical maximum amounts described by 40CFR, Part 257, U.S.E.P.A., September 1979.
    3. Total Kjeldahl nitrogen, ammonia-nitrogen, nitrate-nitrogen from a composite of the sludge being applied.
    4. Total percent solids from a composite of the sludge being applied.
- II. The discharger shall submit to the Regional Board on annual screening test of sludge samples to be collected at the wastewater treatment plant, which shall include all metals and organics that are prescribed by the California Assessment Manual on all sludge sources which the discharger intends to use as soil amendments.

III. The discharger shall submit to the Regional Board monthly results of analyses of sludge tested at the wastewater treatment plant, showing the following:

<u>Determination</u>	<u>Unit</u>
a. Arsenic	mg/kg
b. Chromium	mg/kg
c. Cadmium	mg/kg
d. Lead	mg/kg
e. Zinc	mg/kg
f. Copper	mg/kg
g. Nickel	mg/kg
h. Mercury	mg/kg
i. Selenium	mg/kg
j. Total Nitrogen	%
k. Plant Available Nitrogen	lbs/dry ton
l. Solids	%

IV. For a period of 3 years after the last sludge application, the discharger shall submit to the Regional Board an annual report stating which crops are being grown on each field. This report shall include a certification that all resting periods required by E.P.A., 40CFR, Part 257 and the "Manual of Good Practice for Landspreading of Sewage Sludge", Department of Health Services, Sanitary Engineering Branch, April 1983 are maintained.

REPORTING

Monthly reports shall be submitted to the Regional Board by the 15th day of the following month. Annual reports shall be submitted to the Regional Board by the 15th day of January for the previous year. Copies of the reports submitted to the Board pursuant to this Monitoring and Reporting Program shall be maintained at the operations site, and shall be made available to staff of the Regional Board upon request.

Mail reports to:

California Regional Water Quality Control Board  
Colorado River Basin Region  
73-271 Highway 111, Suite 21  
Palm Desert, CA 92260

ORDERED BY:

*Philip A. Greenberg*  
Executive Officer

May 17, 1989  
Date