

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

ORDER NO. 88-40

**WASTE DISCHARGE REQUIREMENTS
FOR
E. T. TECHNOLOGIES, INC.
Imperial County**

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

1. E. T. Technologies, Inc. (hereinafter also referred to as the discharger), 15200 E. Girard Ave., Suite 4100, Aurora, CO 80014, submitted a Report of Waste Discharge, dated January 11, 1988, 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 the requirements of the California Regional Water Quality Control Board as outlined by the California Department of Health Services Manual of Good Practice for Land Spreading of Sewage Sludge.
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 distributed on the application sites with a box-type spreader. Following distribution of sludge on a field, 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.
4. The discharger states that sludge transportation would be achieved with semi-dump trailers. These units would be in good condition and would be equipped 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 basin for the monitoring program.
5. The crops under consideration for sludge application would include bermuda grass, small grain, sugar beets, alfalfa and cotton. Produce crops such as lettuce would be avoided due to California and Federal food chain crop restrictions, where resting periods are mandated when a crop in direct contact with the soil is consumed raw.
6. 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 entirely within the Imperial Hydrologic Unit. The beneficial uses of groundwaters of the Imperial Hydrologic Unit are:

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- a. Deep ground water is saline and in certain areas is being investigated for potential geothermal development.
 - b. Shallow groundwater is influenced by agricultural operations, is saline, enters irrigation drains, and flows to Salton Sea.
- 7. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this facility.
 - 8. The Board in a public meeting heard and considered all comments pertaining to the proposed discharge.
 - 9. These waste discharge requirements govern a facility which causes minor alterations to land, and therefore is exempt from the provisions of the California Environmental Quality Act in accordance with Section 15304 of Title 14, Chapter 13 of the California Administrative Code.

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

A. Discharge Specifications

- 1. No part of the process shall create a pollution or a 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 used for production of the following:
 - a. Non-food chain crops.
 - b. Processed food chain crops as defined in the Manual of Good Practice for Landspreading of Sewage Sludge, California Department of Health Services, Sanitary Engineering Branch, April 1983.
 - c. Animal feed other than that consumed by dairy animals grazing on the site.
- 3. Sludge request forms signed by both the farm operator and the land owner shall be submitted to the Regional Board stating that the crops intended to be grown on the subject acreage and will meet specifications No. 2 and No. 9.
- 4. Land application shall be restricted to only those sites receiving prior approval by the Regional Board of the Colorado River Basin.
- 5. Sludge shall be applied only one time per harvested crop in accordance with the design for any given site and the sludge management plan.
- 6. Sludge shall be land spread and incorporated within 24 hours of arrival on site to prevent odors or the potential for water pollution.
- 7. Sludge shall not be applied on areas exceeding 8% in slope.
- 8. Sludge stockpiles will be limited to approved sites in accordance with Department of Health Services guidelines and stockpiles shall not be located in the following locations:

- a. 25 feet from property lines unless permission is obtained from the adjacent landowner is to receive the sludge.
 - b. 500 feet from occupied dwellings or drinking water wells.
 - c. 50 feet from any highway.
9. Resting periods for public access, livestock grazing and avoidance of unprocessed direct consumption human food chain crops shall be as follows:
- a. Public access shall be controlled for 12 months after sludge application.
 - b. Grazing by animals whose products are consumed by humans shall be prevented for one month after sludge application.
 - c. If pasture is subsequently converted into a dairy pasture, grazing by milking animals shall be prevented for at least 12 months after last sludge application. When the milk is unpasteurized, no grazing shall be allowed.
 - d. There shall be no planting of unprocessed food chain crops for three years after sludge application.
10. The maximum sludge application rate shall be 12 tons per acre per year. Application rates which exceed 12 tons per acre per year shall be forbidden without written approval of the Executive Officer.
11. Sludges shall not be applied if any of the constituents of that sludge would cause either a public nuisance or result in phytotoxicity.
12. If constituent values in either the sludge to be applied or in the field that the sludge has already been applied are considered unacceptable by the Executive Officer, the operation shall cease immediately and in the case of the sludge that has already been applied, remedial action shall be taken.
13. Discharge of the waste material noted in Findings No. 2 and 3, above, is prohibited in any areas outside of the Imperial Hydrologic Unit.

B. Provisions

1. The discharger shall submit to the Regional Board a screening test, which includes 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. Also, as new fields are added and sludge applied thereto, there shall be a subsequent change in the Monitoring and Reporting Program which is appended to this Order to include these new fields and sludges applied thereto.
2. The discharger shall comply with "Monitoring and Reporting Program No. 88-40" and future revisions thereto, as specified by the Executive Officer.
3. Prior to any significant 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.

4. Since this type of discharge has not been prevalent in this Region, the discharger is hereby notified that these discharge requirements might be revised in part or substantially in the very near future as experience is gained. Also, the Board hereby states that others should not consider the discharge requirements contained in this Order to constitute a precedent.

I, Arthur Swajian, 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 March 23, 1988.



Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

MONITORING AND REPORTING PROGRAM NO. 88-40
FOR
E. T. TECHNOLOGIES, INC.
Imperial County

MONITORING

E. T. Technologies, Inc. (discharger) shall report to the Regional Board concerning the following:

I. The discharger shall submit to the Regional Board monthly reports as follows:

A. Samples shall be taken monthly from each field where sludge is being applied,

1. Number of tons applied that month and 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 and pounds per acre that have been applied of each metal in the lifetime of the field and theoretical maximum amounts of each metal than can be applied.

B. Samples shall be taken monthly from the sludge applied to each field:

1. Total Kjeldahl nitrogen, ammonia-nitrogen, nitrate-nitrogen from a composite of the sludge being applied.
2. Total percent solids from a composite of the sludge being applied.
3. Polychlorinated biphenyls (PCBs) in mg/kg from a composite of the sludge being applied.

II. The discharger shall submit to the Regional Board the results of a composite soil sample from each field prior to any new sludge application to that field, the following data:

	<u>Determination</u>	<u>Unit</u>
A.	Chromium	mg/kg
B.	Cadmium	mg/kg
C.	Lead	mg/kg
D.	Zinc	mg/kg
E.	Copper	mg/kg
F.	Total Nitrogen	%
G.	pH	-
H.	Cation Exchange Capacity	meg/100 grams
I.	Selenium	mg/kg

- III. 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.
- IV. The discharger shall submit to the Regional Board monthly results of sludge tested at the wastewater treatment plant, the following: (Treatment plant results are 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	%

The above monitoring program shall be implemented and/or maintained immediately upon adoption of Order No. 88-40.

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 before use of that sludge on any field in that calendar 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:


 Executive Officer

March 23, 1988

Date