

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 93-020

WASTE DISCHARGE REQUIREMENTS
FOR
HYDRA-CO OPERATIONS, INC.
DISCHARGE OF INDUSTRIAL WASTEWATER FROM A
15 MEGAWATT (NET) BIOMASS WASTE FUELED POWER PLANT
South of Brawley - Imperial County

*Superseded by SO# 94-003
1/94*

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

1. Hydra-Co Operations, Inc., P.O. Box 3096, El Centro, CA 92244 (hereinafter referred to as the discharger) operates a power generating facility at 3505 Highway 111, about 6 miles south of Brawley, in the County of Imperial. The facility currently burns approximately 485 tons-per-day of wood waste as fuel to generate approximately 15-17 megawatts of electricity. The wood fuel consists primarily of construction waste, pallets, trees, and reclaimed landfill material. Although the initial facility permit application proposed burning of crop waste and cattle manure, these fuels are not presently burned at the facility.
2. The discharger proposes to discharge approximately 0.17 million-gallons-per-day (MGD) of wastewater into an on-site percolation/evaporation pond. The pond has an overflow weir to another smaller pond. The smaller pond collects much of the storm water flow from the site. There is a gate on this pond that leads to Rose Drain. Currently, all of the wastewater percolates to the ground water and no wastewater is discharged to Rose Drain. The location of the discharge is in the N 1/2 of Section 27, T14S, R14E, SBB&M.
3. This Board Order is for the discharge of wastewater to the percolation pond. Discharges of wastewater to Rose Drain are covered in Board Order No. 93-011.
4. The discharge has been subject to waste discharge requirements adopted in Board Order No. 88-004 and 89-006.
5. Wastewater from the facility is generated from the following sources:
 - a. Cooling tower blowdown
 - b. Boiler blowdown
 - c. Reverse osmosis
 - d. Plant drains (rain water, wash water)
 - e. Laboratory drain
 - f. Treated sewage (AIRR Treatment System) from the plant
6. The following chemicals are added to the process water to treat the boiler and cooling tower water. All of the following chemicals (except chlorine, sodium hydroxide, and sulfuric acid) are usually supplied by Nalco.

<u>Chemical Name</u>	<u>Dosage/Range</u>	<u>Purpose of Treatment</u>
<u>Boiler</u>		
1747-Phosphate	10-20 ppm, PO ₄	Scale Inhibitor
352-Morpholine	2.3 lbs/day	Corrosion Inhibitor
Elimin-ox	.3-.6 ppm	Oxygen Scavenger
Sodium Hydroxide	As Needed	pH Control

Cooling Tower

8301D	34-45 ppm	Dispersant, Scale Inhibitor
8306D	8-16 ppm, PO ₄	Corrosion Inhibitor
Sulfuric Acid	As Needed	pH Control
Chlorine	As Needed	Control of Bacteria, Fungi, and Algae
1337 Biocide	As Needed	Control of Bacteria, Fungi, and Algae
71-D5	As Needed	Anti-Foam

7. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted May 15, 1991 and designates the beneficial uses of ground and surface waters in this Region.
8. The designated beneficial uses of ground waters in the Imperial Hydrologic Unit are:
 - a. Municipal supply (MUN)
 - b. Industrial supply (IND)
9. Within the Imperial Valley area of the Imperial Hydrologic Unit, much of the ground water is too saline for municipal use. The existing municipal use in this area is practically inconsequential.
10. In accordance with Section 15301, Chapter 3, Title 14 of the California Code of Regulations, the issuance of these waste discharge requirements, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.).
11. The Board has notified the discharger, and all known interested agencies and persons of its intent to update waste discharge requirements for said discharge and has provided them with an opportunity for a public meeting and an opportunity to submit comments.
12. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency on November 16, 1990 (40 Code of Federal Regulations (CFR) Parts 122, 123, and 124). In conformance with these regulations, the State Water Resources Control Board adopted a General NPDES Permit for Storm Water Discharges Associated with Industrial Activities, Water Quality Order No. 91-13-DWO, NPDES No. CAS000001, on November 19, 1991. Industrial facilities are required to obtain NPDES permits for their storm water discharges.

13. The State Water Resources Control Board adopted the California Inland Surface Waters Plan (ISWP) on April 11, 1991. The Plan includes water quality objectives and other requirements. This Board Order implements the Plan.

IT IS HEREBY ORDERED that Board Order No. 89-006 is rescinded, and that in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, the discharger shall comply with the following:

A. Effluent Limitations:

1. Wastewater discharged to the percolation pond shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Maximum</u>	<u>30-Day Mean</u>
Total Dissolved Solids (TDS)	mg/L	4500	4000
Copper (Total)	mg/L	1.0	--
Zinc	mg/L	1.0	--
Total Chromium	mg/L	0.2	--
Iron	mg/L	1.0	--
Total Phosphorus	mg/L	0.1	--

2. The effluent values for pH shall remain within the limits of 6.0 and 9.0.
3. There shall be no acute toxicity in the treatment plant effluent being discharged to the percolation pond. Acute toxicity is defined as less than ninety percent survival, fifty percent of the time, and less than seventy percent survival, ten percent of the time, of standard test organisms in undiluted effluent in a 96-hour static or continuous - flow test.

B. Discharge Specifications

1. The discharge shall not cause an increase of the total dissolved solids (TDS) content in the ground water, unless it can be demonstrated to the satisfaction of the Regional Board's Executive Officer that such an increase does not adversely affect the beneficial uses.
2. The discharge shall not cause a violation of any applicable water quality standard for the ground water adopted by the Regional Board, the State Water Resources Control Board or the U.S. Environmental Protection Agency as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Regional Board will revise and modify this Board Order in accordance with such more stringent standards.
3. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Sections 13050(l) and 13050(m) of Division 7 of the California Water Code.

4. No changes in the type or amount of water treatment chemicals added to the process waters as described in Finding No. 6 of this Board Order shall be made without the written approval of the Regional Board's Executive Officer.
5. The discharge of oil, trash, industrial waste sludge, or any other solids directly to the waste waters at this facility or in any manner that allows it to be washed to surface waters in this Region is prohibited.
6. At no time shall the contents of the pond described in Finding No. 2 contain hazardous materials as defined by State or Federal law.
7. Discharge to Rose Drain shall occur only in emergency situations as permitted by Board Order No. 93-011. Regular disposal of wastewater shall be done through percolation ponds.

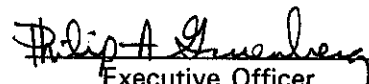
C. Provisions

1. The discharger shall install a device that will continuously monitor Total Dissolved Solids (TDS) concentrations in the effluent. The continuous monitoring device shall be installed within 120 days of the adoption of this Board Order.
2. Stockpiling of ash at this facility for more than 90 days is prohibited. The discharger shall submit a plan for the management of ash to the Regional Board's Executive Officer for review and approval not later than 90 days after the adoption of this Board Order. All ash hauled away shall go to an approved location. Any changes to the ash management plan shall be approved by the Regional Board's Executive Officer before the changes may take effect. Any ash stored on site prior to the adoption of this Board Order shall be removed or disposed of in an approved manner within six months of the adoption of this Board Order.
3. The discharger shall, at all times, properly operate and maintain all systems and components of treatment and control which are installed or used by the discharger to achieve compliance with the conditions of this Board Order. Proper operation and maintenance includes effective performance, adequate process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order. All systems, both in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of these inspection results and maintenance performed and made available to the Regional Board upon demand.
4. The discharger shall comply with "Monitoring and Reporting Program No. 93-020", and future revisions thereto, as specified by the Regional Board's Executive Officer.
5. Prior to any modifications in this facility which would result in material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the discharger shall report all pertinent information in writing to the Regional Board and obtain revised requirements before any modifications are implemented.
6. The discharger shall submit a Notice of Intent (NOI) to the State Water Resources Control Board to be covered under the statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 91-13-DWQ (as amended by Water Quality Order No. 92-12-DWQ), NPDES No. CAS000001. The discharger shall comply with all the discharge prohibitions, receiving water limitations, and provisions of the general permit, including the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be submitted to the Regional Board's Executive Officer for review and approval no later than 90 days after the adoption of this Board Order.

7. The discharger shall submit a sampling and monitoring plan for storm water discharges to the Regional Board's Executive Officer for review and approval no later than 90 days after the adoption of this Board Order. The plan shall meet the minimum requirements of Section B, Monitoring Program and Reporting Requirements, of the Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 91-13-DWQ (as amended by Water Quality Order No. 92-12-DWQ), NPDES No.CAS000001.
8. All storm water discharges from the facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other courses under their jurisdiction.
9. The discharger shall maintain a copy of this Board Order at the site so as to be available at all times to site-operating personnel. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order.
10. Upon adoption of this Board Order, the discharger shall comply with all conditions and limitations of this Board order. Any Board Order noncompliance constitutes violation of the California Water Code and is grounds for enforcement action, permit termination, or denial of a renewal application.
11. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
12. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
13. This Board Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a Board Order modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include the promulgation of new regulations or adoption of new regulations by the State Board or the Regional Board, including revisions to the Basin Plan.
14. The discharger shall provide adequate notice to the Regional Board's Executive Officer of the following:
 - a. Any new introduction of pollutants into any of the treatment facilities described in the findings of this Board Order from an indirect discharger.
 - b. Any substantial change in the volume or character of pollutants being introduced into any of the treatment facilities described in the findings of this Board Order by an existing or new source.
 - c. Adequate notice shall include information on the quality and quantity of effluent introduced, and any anticipated impact of the change on the quantity or quality of the discharger's effluent.
 - d. The discharger shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the discharger's next scheduled self-monitoring report or earlier if requested by the Regional Board's Executive Officer.
15. The discharger shall allow the Regional Board's Executive Officer, or his/her authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or facilities where records must be kept under the conditions of this Board Order.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Board Order. Inspect and sample or monitor, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order.
16. The discharger shall allow the Regional Board's Executive Officer, or his/her authorized representative, to sample or monitor effluent for the purposes of determining compliance with this Board Order.

I, Philip A. 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 March 31, 1993.


Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 93-020
FOR
HYDRA-CO OPERATIONS, INC.
DISCHARGE OF INDUSTRIAL WASTEWATER FROM A
15 MEGAWATT (NET) BIOMASS WASTE FUELED POWER PLANT
South of Brawley - Imperial County

Location of Discharge: On-site Percolation Pond, in the N 1/2 of Section 27, T14S, R14E, SBB&M

MONITORING

Wastewater effluent discharged to the percolation pond shall be monitored for constituents indicated below. If the facility is not in operation or there is no discharge to the percolation pond, a letter should be sent each month to the Regional Board indicating that no discharge has occurred.

A sampling station shall be established at the outfall where discharge to the percolation pond occurs. Representative samples of the effluent shall be taken and tested for the constituents as described below.

<u>Constituent</u>	<u>Unit</u>	<u>Sample</u>	<u>Type of Frequency</u>
Total Dissolved Solids (TDS)	mg/L ¹	Grab	Daily ²
Total Suspended Solids (TSS)	mg/L	Grab	Weekly
Biochemical Oxygen Demand (BOD)	mg/L	Grab	Quarterly
Chemical Oxygen Demand (COD)	mg/L	Grab	Quarterly
Copper (Total)	mg/L	Grab	Weekly
Zinc (Total)	mg/L	Grab	Weekly
Chromium (Total)	mg/L	Grab	Weekly
Iron (Total)	mg/L	Grab	Weekly
Total Phosphorus	mg/L	Grab	Weekly
Residual Chlorine	mg/L	Grab	Weekly

¹mg/L = milligrams per liter

²For every day that discharge occurs

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Frequency</u>
pH	pH Units	Grab	Daily
Flow	GPD ³	Estimate	Daily
Volatile Organics (EPA Test Method 624)	$\mu\text{g/L}^4$	Grab	Annually
Semi-Volatile Organics (EPA Test Method 625)	$\mu\text{g/l}$	Grab	Annually

When the sampling frequency is less than one day and the value exceeds the monthly average, the sampling frequency shall be increased to daily until such time as full compliance with the daily and monthly values is indicated. The collection, preservation and holding times of all samples shall be in accordance with U.A. EPA-approved procedures. All analysis shall be conducted by a laboratory certified by the State Department of Health Services to perform the analysis.

EFFLUENT CHRONIC TOXICITY TESTING

The discharger shall conduct chronic toxicity testing on the treatment plant effluent as follows:

<u>Test</u>	<u>Units</u>	<u>Type of Samples</u>	<u>Minimum Frequency of Test</u>
Chronic Toxicity	tu_c	Composite	Quarterly ⁵

Both test species given below shall be used to measure chronic toxicity:

Critical Life Stage Toxicity Tests

<u>Species</u>	<u>Effect</u>	<u>Test Duration (Days)</u>	<u>Reference</u>
fathead minnow (Pimephales promelas)	larval survival and growth rate	7	Horning & Weber, 1989
water flea (Ceriodaphnia dubia)	survival; number of young	7	Horning & Weber, 1989

³GPD = Gallons-per-day

⁴ $\mu\text{g/L}$ = Micrograms-per-day

⁵Quarterly for every quarter that discharge occurs.

Toxicity Test Reference: Horning W.B. and C.I. Weber (eds). 1989. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organism. Second edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-89/001.

Dilution and control waters should be obtained from an unaffected area of the receiving waters. Standard dilution water should be used if the above sources exhibit toxicity greater than 1.0 tu_c . The sensitivity of the test organism to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

Chronic toxicity shall be expressed and reported as toxic units (tu_c) where:

$$tu_c = 100/NOEL$$

and the No Observed Effect Level (NOEL) is expressed as the maximum percent effluent of test water that causes no observed effect on a test organism, as determined in a critical life stage toxicity test (indicated above).

Acute toxicity shall be calculated from the results of the chronic toxicity test described above and shall be reported along with the results of each chronic test. Acute toxicity shall be expressed as percent survival of test organism over a ninety-six hour period.

REPORTING

1. Daily and weekly monitoring shall be submitted in a monthly report to the Regional Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year.
2. The discharger shall arrange the data in tabular form so that the specified information is readily discernable. The data should be summarized in such a manner as to clearly illustrate whether the discharge is in compliance with the discharge limitations.
3. Each report shall contain the following statement:

"I declare under the penalty of law that this document and all the attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
4. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board Order, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Board's Executive Officer at any time.
5. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements.
 - b. The individual(s) who performed the sampling or measurements.
 - c. The date(s) analyses were performed.
 - d. The individual(s) who performed the analyses.
 - e. The results of such analyses.

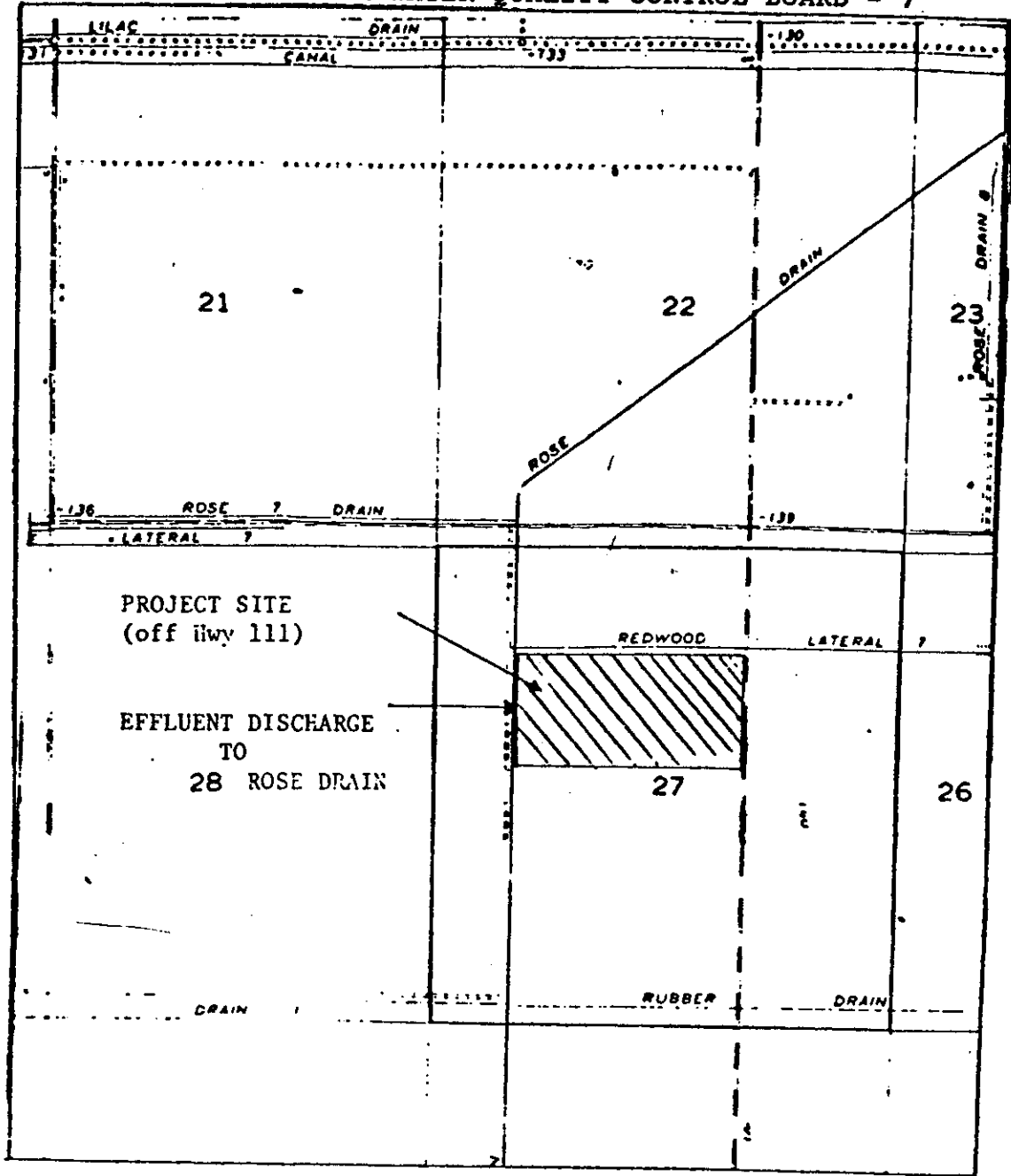
Submit monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

ORDERED BY: Philip A. Greenberg
Executive Officer

March 31, 1993
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



SITE MAP

HYDRA-CO OPERATIONS, INC.
DISCHARGE OF INDUSTRIAL WASTEWATER FROM A
15 MEGAWATT (NET) BIOMASS WASTE FUELED POWER PLANT
South of Brawley - Imperial County
Discharge Location: On-site Percolation Pond in the N½ of Section 27, T14S, R14E, SBB&M
USGS Brawley 7.5 Minute Topographic Map