

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

PERMIT NO. 01-103
NPDES NO. CA0104990

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND
WASTE DISCHARGE REQUIREMENTS
FOR
ISG ENERGY, LLC, OWNER/OPERATOR
MESQUITE LAKE RESOURCE RECOVERY
DISCHARGE OF INDUSTRIAL WASTEWATER FROM A
15-45 MEGAWATT (NET) ALTERNATIVE FUEL POWER PLANT
South of Brawley – Imperial County

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

1. ISG Energy, LLC (hereafter referred to as “discharger”) submitted an NPDES Application for a permit to discharge industrial wastewater on March 30, 2001. ISG Energy, LLC (hereinafter referred to as the discharger) purchased Mesquite Lake Resource Recovery on or about March 12, 2001.
2. The discharger purchased the real property on which facility is located on or about April 10, 2001, from New Charlston Power I (NCPI).
3. The discharger plans to operate and upgrade an existing power generating facility at 3559 Highway 111, about six (6) miles south of Brawley, in the County of Imperial, as shown on the Site Map incorporated herein and made a part of this Order. The facility is an electrical power generation plant, which utilizes tire-derived fuel (TDF). Major activities involve the conveyance of TDF to a fluidized bed furnace producing steam for the generation of electrical power via a steam turbine and generator, as shown on Attachment A (Schematic Flow Diagram for Process Water and Wastewater) incorporated herein and made a part of this Order.
4. The upgraded facility will generate approximately 15-17 megawatts of electricity at project start-up and will increase electrical output to 45 megawatts within the first year of operation. Natural gas is used as a supplemental fuel source.
5. The discharger will discharge approximately 170,000 gallons-per-day (gpd) of industrial wastewater into the Rose Drain in the SW ¼ of Section 27, T14S, R14E, SBB&M at project start-up. Discharge volume will increase to 510,000 gpd at plant capacity. After discharge to the Rose Drain, the wastewater flows about five (5) miles to the Alamo River and then twenty-nine miles to the Salton Sea.
6. Previous discharges of wastes from the facility have been subject to an NPDES Permit and waste discharge requirements adopted in Board Order No. 93-010 (NPDES No. CA0104361) adopted March 31, 1993, which allows for discharge to the Rose Drain. Since 1998, the time when NCPI ceased operation of the facility, there has been no discharge of waste from the site.

7. Wastewater from the facility is generated from the following sources:
 - a. Cooling tower blowdown
 - b. Boiler blowdown
 - c. De-ionizer blowdown
8. The following chemicals are added to the process to treat the boiler and cooling tower water.

<u>Chemical Name</u>	<u>Dosage/Range</u>	<u>Purpose of Treatment</u>
Etanolamine	As needed	Oxygen Scavenger
Organophosphate	As needed	Corrosion and Deposit Control
Chlorine (solid tablets)	As needed	Biocide
2.2 Dibromo – 3 nitropropionamide	As needed	Biocide

9. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan) was adopted on November 17, 1993, and designates the beneficial uses of ground and surface waters in this Region.
10. The designated beneficial uses of waters in the Imperial Valley Drains are:
 - a. Fresh Water Replenishment of Salton Sea (FRSH)
 - b. Water Contact Recreation (REC I)^{1,2}
 - c. Non-contact Water Recreation (REC II)¹
 - d. Warm Water Habitat
 - e. Wildlife Habitat (WILD)
 - f. Preservation of Rare, Endangered or Threatened Species (RARE)³
11. The primary purpose of drains in the Imperial Valley is for conveyance of drainage in support of agriculture.
12. The proposed discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-18. If terms of the Board Order are met, the impact on water quality would be insignificant, including potential impacts of aquatic life, which is the beneficial use most likely affected by pollutants discharged.
13. The action to adopt an NPDES Board Order for an existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA: Public Resources Code Section 21100, et. Seq.), pursuant to Section 13389 of the California Water Code.

¹ Unauthorized use.

² The only REC I usage that is known to occur is from infrequent fishing activity.

³ RARE = Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Game on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board.

14. Effluent and receiving water limitations in this Board Order are based on the Federal Clean Water Act, Basin Plan and State Water Resources Control Board's plans and policies, U.S. Environmental Protection Agency guidance, best professional judgment, and best available technology economically achievable.
15. Effluent limitations and toxic and pretreatment effluent standards, established pursuant to Sections 301, 302, and 307 of the Federal Clean Water Act (CWA) and amendments thereto are applicable to the discharge and are implemented in this Board Order.
16. The U.S. Environmental Protection Agency and the Regional Board have classified this discharge as a minor discharge.
17. The U.S. Environmental Protection Agency adopted the National Toxics Rule (NTR) on February 5, 1993. The NTR requires effluent limitation for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numeric water quality standard.
18. On May 18, 2000, the U.S. Environmental Protection Agency published the adopted California Toxics Rule (CTR). The CTR promulgates new criteria for both human health protection and protection of aquatic life. New numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants are listed. In addition, the CTR contains a compliance schedule provision, which authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met.
19. On March 2, 2000, the State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (California Toxic Policy). This Policy establishes (1) implementation provisions for priority pollutant criteria promulgated by the U.S. Environmental Protection Agency through the NTR and CTR and for priority pollutant objectives established by the Regional Water Quality Control Boards in their water quality control plans; (2) monitoring requirements for 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin (TCDD) equivalents; and (3) chronic toxicity control provisions.
20. 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.
21. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, that Board Order No. 93-010 is terminated, and in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act, and regulations and guidelines adopted thereunder, the discharger shall comply with the following:

A. Effluent Limitations

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

<u>Constituent</u>	<u>Unit</u>	<u>Criterion Maximum Concentration</u>	<u>30-Day Arithmetic Mean Discharge Concentration</u>
Total Suspended Solids (TSS)	mg/L ⁴	100.0	30.0
Total Dissolved Solids (TDS)	mg/L	4500	4000
Copper (Total)	mg/L	0.05	--
Zinc	µg/L ⁵	120	--
Chromium (Total)	mg/L	0.02	--
Iron	mg/L	1.0	--
Total Phosphorus	mg/L	0.1	--
Residual Chlorine	mg/L	0.02	0.01

2. The inverse log of the hydrogen ion (pH) of the effluent shall be maintained within the limits of 6.0 to 9.0.
3. The discharged effluent's temperature shall not adversely impact the beneficial uses of the Rose Drain.
4. The effluent shall not contain heavy metals, chemicals, pesticides, or other constituents in concentrations toxic to aquatic life.

B. Receiving Water Limitations

1. Receiving water limitations are based upon water quality objectives contained in the Basin Plan. As such they are a required part of this Board Order. Effluent discharged to the Rose Drain shall not cause the following:
 - a. The dissolved oxygen content to be depressed below 5.0 mg/L. During any period when the receiving water's dissolved oxygen content is already below 5.0 mg/L, the discharge shall not cause any further depression.

⁴ mg/L = Milligrams per Liter

⁵ µg/L = Micrograms per Liter

- b. Oil, grease, wax, floating material (liquids, solids, foam, and scum) or suspended material in amounts that create a nuisance or adversely affect beneficial uses.
 - c. Deposition of objectionable solids.
 - d. Turbidity to increase by more than 10 percent over background levels.
 - e. The normal ambient pH to fall below 6.0 or exceed 9.0 units
 - f. An increase in aquatic growth to the extent that such growths cause a nuisance or adversely affect beneficial uses.
 - g. Objectionable color and/or odor.
 - h. The maximum electrical conductivity to exceed background levels.
2. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board 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 the Board Order in accordance with such more stringent standards.

C. Prohibitions

1. Discharge of blowdown water at a location or in a manner different from that described in Findings No. 3 and 5, above, is prohibited.
2. The direct discharge of any wastes to any surface waters or surface drainage courses is prohibited.
3. The discharge of waste to land not owned or controlled by the discharger is prohibited.
4. The discharge or deposit of hazardous waste (as defined in California Code of Regulations, Title 27) at this site is prohibited.
5. The discharge shall neither cause nor contribute to the contamination or pollution of groundwater via the release of waste constituents in either liquid or gaseous form.
6. The discharger shall not cause nor contribute in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the unit if such waste constituents could migrate to waters of the State, in either the liquid or the gaseous phase, and cause a condition of contamination or pollution.

D. Specifications

1. 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.

2. The facility shall be protected from any washout or erosion of waste or covering material and from any inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.
3. Bioassays shall be performed to evaluate the toxicity of the discharged wastewater in accordance with the following procedures unless otherwise specified by the Regional Board's Executive Officer or his designee:
 - a. Bioassays shall be conducted on a sensitive fish species and an invertebrate species as approved by the Regional Board's Executive Officer. Pimephales promelas (Fathead minnow) and Ceriodaphnia are suggested species, which may be utilized. The bioassays shall be conducted in accordance with the protocol given in EPA/600/4-89/001 – Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms and EPA/600/4-90/027 F-Method for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms.
 - b. The bioassay test specified in the Monitoring and Reporting Program shall be performed as specified. In addition, pH stabilization of the bioassay sample is acceptable.
4. Any chronic toxicity test that exceeds 2 chronic toxicity units (TU_c) or a three-sample median (quarterly samples) that exceeds 1 TU_c may trigger an accelerated monitoring frequency. In addition, any acute toxicity result showing high toxicity may trigger an accelerated monitoring frequency. High acute toxicity is defined as follows:
 - a. Less than 80% survival when acute toxicity is calculated from results of the chronic toxicity test, or
 - b. Less than 90% survival as calculated from the results of the acute toxicity test.
5. Accelerated monitoring frequency shall consist of performing three (3) toxicity tests in a six-week period following the first exceedence of the chronic or acute toxicity triggers.
6. A Toxicity Identification Evaluation (TIE) may be triggered if the accelerated monitoring frequency indicate any of the following:
 - a. A chronic toxicity of 2 TU_c or greater,
 - b. The three-sample median exceeds 1 TU_c,
 - c. Less than 80% survival when acute toxicity is calculated from results of the chronic toxicity test, or
 - d. Less than 90% survival when acute toxicity is calculated from the results of the acute toxicity test.
7. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the U.S. Environmental Protection Agency and includes, but need not be limited to, proposed:
 - a. Test species;
 - b. Method of collection of effluent samples (preferably composite samples);
 - c. Duration of test;
 - d. Environmental conditions under which the tests are to be performed;

- e. Number of replications;
 - f. Descriptions of the "treatment" of the effluent; and
 - g. Time schedule for implementation.
8. If repeated tests reveal toxicity as a result of the waste discharge, the discharger may be required to conduct a Toxicity Reduction Evaluation (TRE). The discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified; and a failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity in a permit or appropriate enforcement action.

E. Provisions

1. This Board Order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402 of the Federal Clean Water Act, as amended, and shall become effective at the end of ten days from the date of the hearing when this Board Order was adopted by the Regional Board, provided the Regional Administrator, U.S. Environmental Protection Agency has no objections.
2. This Board Order expires five (5) years from date of adoption and the discharger shall submit an NPDES application and file a complete Report of Waste Discharge in accordance with Title 23, California Code of Regulations, at least 180 days in advance of such date as an application for issuance of a new Board Order.
3. The discharger shall comply with "Standard Provisions for National Pollutant Discharge Elimination System Permit" dated October 1990.
4. All storm water discharges from this 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.
5. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.
6. 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.
7. The discharger shall comply with all conditions of this Board Order. Noncompliance constitutes a violation of the Federal Clean Water Act, and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification of waste discharge requirements; or denial of a Permit renewal application.
8. 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. 97-03DWQ, 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. The Storm Water Pollution Prevention Plan shall be submitted to the Regional Board's Executive Officer for review and approval no later than 90 days after the adoption of the Board Order.

9. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
10. The discharger is the responsible party for the waste discharge requirements and the monitoring and reporting program for the facility. The discharger shall comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions including Regional Board Orders or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board.
11. Any proposed change in corrosion control or biological control treatment(s) utilized in the cooling towers and a listing of any of U.S. Environmental Protection Agency's 126 priority pollutants contained in the treatments shall be reported to the Regional Board.
12. The discharger shall furnish, under penalty of perjury, technical and monitoring reports and such reports shall be submitted in accordance with the specifications prepared by the Regional Board's Executive Officer. Such specifications are subject to periodic revisions as may be warranted.
13. Prior to any modifications at 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 in writing to the Regional Board's Executive Officer.
14. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the U.S. Environmental Protection Agency.
15. The discharger shall comply with "Monitoring and Reporting" Program No. 01-103, and future revisions thereto, as specified by the Regional Board's Executive Officer; and shall be in accordance with the following:
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. The monitoring and reporting of influent, effluent, and sludge shall be done, at a minimum, on an annual basis, and more frequently, depending on the nature and effect of the sewage sludge use or disposal practices, or as specified in this Board Order.
 - c. Records of monitoring information shall include:
 1. The date, exact place, and time of sampling measurement(s).
 2. The individual(s) who performed the sampling or measurement(s).
 3. The date(s) analyses were performed.
 4. The individual(s) who performed the analyses.
 5. The analytical techniques or methods used.
 6. The results of such analyses.

- d. The results of any analysis of samples taken more frequently than required at the locations specified in this Monitoring and Reporting Program shall be reported to the Regional Board.
16. The discharger may be required to submit technical reports as directed by the Regional Board's Executive Officer.
 17. This Board Order may be modified, revoked and reissued, or terminated for any cause stated below. The filing of a request by the discharger for a Board Order modification, revocation, and re-issuance, 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, modification of land application plans, or modification in sludge use or disposal practices, adoption of new regulations by the State Board or Regional Board, including revisions to the Basin Plan.
 18. The discharger shall submit a Spill Response Plan (SRP) for Regional Board staff review within six (6) months of the date of adoption of this Order. Thereafter, the plan shall be updated annually, and shall be available for staff review during Regional Board inspections. The discharger shall ensure that all operating personnel are familiar with the contents of the SRP. A copy of the SRP shall be maintained at the site and shall be accessible to all operating personnel.
 19. The discharger shall report any noncompliance that is likely to endanger human health or the environment, within 24 hours of becoming aware of its occurrence. The incident shall be reported to the Regional Board Office and to the Office of Emergency Services. During non-business hours, the discharger shall leave a message on the Regional Board's voice mail. The Office of Emergency Services is operational 24 hours a day. A written report shall be submitted to this office, within five (5) business days of the discharger becoming aware of the incident. The report shall contain a description of the noncompliance, its causes, the duration, and the actual or anticipated time for achieving compliance. The report shall include complete details of the steps that the discharger has taken or intends to take, in order to prevent recurrence. All intentional or accidental spills exceeding 1,000 gallons shall be reported as required by this provision.
 20. The discharger shall submit data sufficient to determine if a water quality-based effluent limitation is required in the discharge permit as required under the California Toxics Policy. It is the discharger's responsibility to provide all information requested by the Regional Board for use in the analysis. Within 90 days of adoption of this Board Order, the discharger shall provide a time schedule acceptable to the Regional Board for providing the data. The time schedule shall be as short as possible but not to exceed three (3) years from the effective date of the California Toxics Policy. The time schedule shall contain interim requirements and dates for their achievement. There shall not be more than one (1) year between interim dates. The interim requirements require that the discharger shall notify the Regional Board, in writing, no later than 14 days following each interim date, of its compliance or noncompliance with the interim requirements. The permit shall be reopened to establish water quality-based effluent limitations, if necessary.
 21. In addition, should the discharger request to use a translator for metals and selenium different than the U.S. Environmental Protection Agency conversion factor, it shall complete a translator study within two (2) years from the date of the issuance of this permit as stated in the California Toxics Policy. In the event a translator study is not completed within the

specified time, the U.S. Environmental Protection Agency conversion factor-based effluent limitation as specified in the CTR shall be effective as a default limitation.

22. The discharger shall, as required by the Regional Board's Executive Officer, conduct a Pollutant Minimization Program in accordance with the California Toxics Policy when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and a sample result is reported as detected and not quantified and the effluent limitation is less than the reported minimum level; or a sample result is reported as not detected and the effluent limitations is less than the method detection limit.
23. The permit shall be reopened and modified or revoked and reissued as a result of the detection of a reportable priority pollutant identified by special conditions' monitoring data, included in this permit. These special conditions in the permit may be, but are not limited to, fish tissue sampling, whole effluent toxicity tests, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in the permit as a result of the special condition monitoring data.
24. The discharger shall monitor its effluent for the presence of 17 (Toxic equivalency factors for 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin equivalents) congeners once during the dry weather and once during the wet weather each year for a period of three (3) consecutive years, beginning this year.
25. The Federal Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Federal Clean Water Act is subject to a civil or criminal penalty.
26. This Board Order shall be modified, or, alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Section 301(b)(2)(C and D) 304(b)(2) and 307 (a)(2) of the Clean Water Act.
27. This Board Order may be reopened to address any new amendments to applicable Water Quality Control Plans that would affect the requirements for the discharge.

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 September 5, 2001.

Executive Officer