

North Coast Regional Water Quality Control Board

**ORDER No. R1-2013-0019
WDID No. 1B11058RHUM**

**WASTE DISCHARGE REQUIREMENTS
FOR THE CALIFORNIA DEPARTMENT OF TRANSPORTATION
BRACUT WASTEWATER TREATMENT FACILITY**

HUMBOLDT COUNTY

The following Permittee is subject to waste discharge requirements as set forth in this Order:

Table 1. Permittee Information

Permittee	California Department of Transportation
Name of Facility	Bracut Wastewater Treatment Facility
Facility Address	6100 Highway 101 North
	Eureka, CA 95503

The discharge by the California Department of Transportation from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Discharge Location
001	Treated Industrial Wastewater	N40d 49'44"	W124d 4'57"	Groundwater

IT IS HEREBY ORDERED, that the Permittee shall comply with the requirements in this Order.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on May 2, 2013.

Matthias St. John, Executive Officer

Table of Contents

I.	Facility Information.....	3
II.	Findings.....	3
III.	Discharge Prohibitions.....	4
IV.	Effluent Limitations.....	5
V.	Discharge Specifications.....	6
VI.	Solids Discharge Specifications.....	7
VII.	Receiving Water Limitations.....	8
VIII.	General Provisions.....	8
	A. Standard Provisions.....	8
	B. Other Provisions.....	13
IX.	Compliance Determination.....	14
	A. Average Monthly Effluent Limitation (AMEL).....	14
	B. Average Weekly Effluent Limitation (AWEL).....	14
	C. Maximum Daily Effluent Limitation (MDEL).....	14
	D. Instantaneous Minimum Effluent Limitations.....	15
	E. Instantaneous Maximum Effluent Limitations.....	15
	F. Bacteriological Limitations.....	15

List of Tables

Table 1.	Permittee Information.....	1
Table 2.	Discharge Location.....	1
Table 3.	Facility Information.....	3
Table 4.	Final Effluent Limitations – Discharge Point 001 (Leach Field Discharge).....	5

List of Attachments

Attachment A – Facility Location Map.....	A-1
Attachment B – Monitoring and Reporting Program.....	B-1
Attachment C – Fact Sheet.....	C-1

I. FACILITY INFORMATION

The following Permittee is subject to waste discharge requirements as set forth in this Order:

Table 3. Facility Information

Permittee	California Department of Transportation
Name of Facility	Bracut Wastewater Treatment Facility
Facility Address	6100 Highway 101 North
	Eureka, CA 95503
	Humboldt County
Facility Contact, Title, and Phone	Mike Thiel, Lands and Buildings Coordinator, (707) 445-6381
Mailing Address	P.O. Box 3700, Eureka, CA 95502-3700
Type of Facility	Maintenance Station
Facility Design and Permitted Flows	Average Dry Weather Flow (ADWF) = 0.001 million gallons per day (mgd) Peak Wet Weather Flow (PWWF) = 0.003 mgd

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds:

- A. Basis and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee's application for permit coverage. The Fact Sheet (Attachment C) contains facility information, legal authorities, and rationale for Order requirements. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through B are also incorporated into this Order.
- B. Background and Facility Description.** The California Department of Transportation (hereinafter Permittee) submitted a Report of Waste Discharge (ROWD), on June 15, 2011, and applied for renewal of waste discharge requirements to discharge up to 0.001 mgd ADWF of industrial treated wastewater from the California Department of Transportation, Bracut Maintenance Facility (hereinafter Facility) to land owned by the Permittee. Additional background information, including a description of the existing and proposed changes to the Facility, is included in the Fact Sheet.

- C. California Environmental Quality Act (CEQA).** Waste discharges to land covered under this permit are subject to CEQA requirements. On June 29, 2012, the Regional Water Board received a copy of an addendum to the Initial Study/Negative Declaration prepared and certified by the California Department of Transportation on June 18, 2012, to satisfy the requirements of the California Environmental Quality Act (Pub. Resources Code section 21000 et. seq.). The negative declaration evaluated the impacts of the discharge of treated wastewater to groundwater quality.
- D. Notification of Interested Parties.** The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.
- E. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

III. DISCHARGE PROHIBITIONS

- A.** The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B.** Creation of pollution, contamination, or nuisance as defined by section 13050 of the Water Code is prohibited.
- C.** The discharge of untreated or partially treated waste (receiving a lower level of treatment than described in Finding II.B or Attachment C) from anywhere within the collection, treatment, or disposal system is prohibited.
- D.** The discharge of waste to land that is not owned by or under agreement to use by the Permittee is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the California Code of Regulations.
- E.** The discharge of waste at any point not described in Finding II.B or Attachment C or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.
- F.** Discharges of waste that violate any narrative or numerical water quality objective that are not authorized by waste discharge requirements or other order or action by the Regional or State Water Board are prohibited.
- G.** The average daily dry weather flow (ADWF) of waste through the Facility in excess of 0.001 mgd, as determined from the lowest consecutive 30-day average daily flow, is

prohibited. Compliance with this prohibition shall be measured continuously at Monitoring Location EFF-001 and calculated daily.

- H. The peak wet weather flow (PWWF) of waste through the Facility shall not exceed 0.003 mgd. Compliance with this prohibition shall be measured continuously at Monitoring Location EFF-001 and calculated daily.
- I. The discharge of solids is prohibited, except as authorized under section VI.A (Solids Disposal and Handling Requirements) of this Order.
- J. The discharge into the Facility of hazardous wastes¹, including any flammable, explosive, or corrosive wastes, is prohibited.
- K. The discharge of waste to Humboldt Bay and its tributaries is prohibited.
- L. The discharge of non-stormwater water to storm drains is prohibited.

IV. EFFLUENT LIMITATIONS

1. Final Effluent Limitations – Discharge Point 001 The Permittee shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program.

Table 4. Final Effluent Limitations – Discharge Point 001 (Leach Field Discharge)

Parameter	Units	Effluent Limitations				
		Average Monthly ²	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
TPH as Gasoline	mg/L					0.005
TPH as Diesel	mg/L					0.100
TPH as Motor Oil	mg/L					0.175
Benzene	mg/L					0.00015
Toluene	mg/L					0.042
Ethylbenzene	mg/L					0.0032
Xylene	mg/L					0.017
MTBE	mg/L					0.005

¹ “Hazardous waste” is defined under the California Code of Regulations, Article 1, title 22, section 66261.3 et seq.

² See Section IX of this Order regarding compliance with the Average Monthly Effluent Limitation.

Table 4. Final Effluent Limitations – Discharge Point 001 (Leach Field Discharge)

Parameter	Units	Effluent Limitations				
		Average Monthly ²	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Cadmium	mg/L					0.00004
Chromium	mg/L					0.05
Lead	mg/L					0.0002
Zinc	mg/L					2.1
Nickel	mg/L					0.012
Arsenic	mg/L					.0000037
pH	Std units				6.5	8.5
Trichloroethylene	mg/L					0.0017
Tetrachloroethylene	mg/L					0.00006
Acetone	mg/L					6.3
Pentachlorophenol	mg/L					0.0003

V. DISCHARGE SPECIFICATIONS

- A. Objectionable Odor.** Objectionable odors originating at the Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.
- B. Disposal.** Disposal of effluent shall be confined to the effluent disposal areas as defined in this Order.
- C. Discharge.** No waste constituent shall be released or discharged, or placed where it will be released or discharged in a concentration or in a mass that causes violation of the Basin Plan’s water quality objectives for groundwater.
- D. Operation and Maintenance.** The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment and appurtenances) that are installed to achieve compliance with the conditions of this Order and to maximize treatment of wastewater and optimize the quality of the discharge.
- E. Technical Reports.** All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of a person registered to practice in California pursuant to California Business and Professions Code (section 6735, 7835, and 7835.1). To demonstrate compliance

with sections 415 and 3065 of title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner that demonstrates that all work can be clearly attributed to the professional responsible for the work.

- F. Winter Months.** The Facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary infiltration and inflow during the winter months.

VI. SOLIDS DISCHARGE SPECIFICATIONS

A. Solids Storage, Disposal, and Handling Requirements

1. Solids, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes, and grit and screenings generated during preliminary treatment.
2. All collected solid waste removed from liquid wastes shall be removed from screens, sumps, ponds, and tanks as needed to ensure optimal plant operation and disposed of in accordance with applicable federal and State regulations.
3. Solids that are disposed of in a municipal solid waste landfill or used as daily landfill cover shall meet the applicable requirements of 40 CFR 258. In the annual self-monitoring report, the Permittee shall report the amount of solids placed in a landfill and the landfill(s) which received the solids.
4. The Permittee shall take all reasonable steps to prevent and minimize any solids use or disposal in violation of this Order that may adversely affect human health or the environment.
5. Solids treatment, storage, disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
6. Solids treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm.

VII. RECEIVING WATER LIMITATIONS

A. Groundwater Limitations

1. The collection, treatment, storage, and disposal of wastewater shall not cause or contribute to a statistically significant degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements and reasonable best management practices, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
2. The collection, treatment, storage and disposal of treated wastewater shall not cause or contribute to levels of chemical constituents in groundwater that exceed the levels specified in title 22, Division 4, Chapter 15, Article 4, section 64435 of the California Code of Regulations or listed in Table 3-2 of the Basin Plan.
3. The collection, treatment, storage and disposal of treated wastewater shall not cause or contribute to levels of radionuclides in groundwater in excess of the limits specified in title 22, Division 4, Chapter 15, Article 5, section 64443 of the California Code of Regulations.
4. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

VIII. GENERAL PROVISIONS

Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities. The Permittee shall comply with the following provisions:

A. Standard Provisions

1. **Availability.** A copy of this Order and the associated Monitoring and Reporting Program shall be maintained at the Facility and be available at all times to operating personnel.
2. **Enforcement.** The Permittee shall implement the project as described in this Order. Violation of any requirements contained in this Order subject the Permittee to enforcement action, including civil liability, under the Water Code.

3. **Severability.** Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.
4. **Operation and Maintenance.** The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

The Permittee shall maintain an updated Operation and Maintenance Manual (O&M Manual) for the Facility. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel on-site and regulatory inspectors. The O&M Manual shall include the following:

- a. A description of the Facility table of organization which shows the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
- b. A detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation, and equipment.
- c. A description of proper record keeping to document equipment service, record process control parameters, and administrative records needed to provide successful operations.
- d. A description of laboratory and quality assurance procedures.
- e. All process and equipment inspection and maintenance schedules.
- f. A description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.
- g. A description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and

storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. **Change in Discharge.** The Permittee shall promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge.
6. **Change in Ownership.** In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Permittee, the Permittee shall notify the succeeding owner or operator of existence of this Order, and the status of the Permittees' annual fee account; a copy of which shall be forwarded to the Regional Water Board.
7. **Vested Rights.** This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Permittee from liability under federal, state, or local laws, nor create a vested right for the Permittee to continue the waste discharge.
8. **Monitoring and Reporting.** The Permittee shall comply with the Monitoring and Reporting Program and any modifications to these documents as specified by the Regional Water Board Executive Officer. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the CDPH and shall conform to CDPH guidelines. The Permittee shall comply with the MRP in Attachment B of this Order and future revisions thereto.
9. **Records Retention.** The Permittee shall maintain records of all monitoring information, including calibration and maintenance records and all strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer.
10. **Signatory Requirements.** All Report of Waste Discharge (ROWD) applications submitted to the Regional Water Board shall be signed and certified by a principal Executive Officer, ranking elected official, or responsible corporate officer.
 - a. For the purposes of this provision, a principal Executive Officer of a public agency includes:
 - i. The chief executive officer of the agency; or

- ii. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA).
- b. For purposes of this provision, a responsible corporate officer means:
- i. A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- c. Reports required by this Order and other information requested by the Regional Water Board may be signed by a duly authorized representative provided:
- i. The authorization is made in writing by a person described in paragraphs (a) or (b) of this provision;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the entity; and
 - iii. The written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative.
- d. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, 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."

11. **Inspections.** The Permittee shall permit authorized staff of the Regional Water Board the following:
 - a. Entrance to the premises in which treatment, collection or management of waste occurs, where an effluent source is located or in which any records required by this Order are kept;
 - b. Access to inspect and copy any monitoring equipment or records required for compliance with terms and conditions of this Order; and
 - c. Access to sample any discharge or monitoring location associated with the Facility.
12. **Noncompliance.** In the event the Permittee is unable to comply with any of the conditions of this Order due to breakdown of waste treatment equipment, accidents caused by human error or negligence, or other causes such as acts of nature, the Permittee shall notify the Regional Water Board Executive Officer by telephone as soon as it or its agents have knowledge of the incident and confirm this notification in writing within five (5) business days of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.
13. **Adequate Capacity.** If the Permittee's wastewater treatment plant will reach capacity within 4 years, the Permittee shall notify the Regional Water Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies, and the press. Factors to be evaluated in assessing reserve capacity shall include, at a minimum, (1) comparison of the wet weather design flow with the highest daily flow, and (2) comparison of the average dry weather design flow with the lowest 30-day flow. The Permittee shall demonstrate that adequate steps are being taken to address the capacity problem. The Permittee shall submit a technical report to the Regional Water Board showing how flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Water Board, or within 120 days after receipt of Regional Water Board notification, that the WWTF will reach capacity within 4 years. The time for filing the required technical report may be extended by the Regional Water Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Water Board itself (title 23, CCR, section 2232).

B. Other Provisions

1. Reopener Provisions.

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.
- b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation, if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above water quality standards.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

a. Groundwater Monitoring Plan

- i. The Permittee shall determine the impacts to groundwater from the leach field disposal areas, including determination of the groundwater gradient direction. Groundwater monitoring requirements are contained in Attachment B, Table B-3. The plan shall include the following:
 - (a) Proposed location(s) of upgradient monitoring well(s) that will be unaffected by the discharge from the Facility, and which is in the same formation as the proposed downgradient monitoring wells.
 - (b) Proposed locations to construct groundwater monitoring wells downgradient of the disposal site.
 - (c) Proposed well construction techniques, including screening intervals.
 - (d) Surveyed elevations and locations of the proposed wells to the nearest 0.01 foot and 0.1 foot, respectively.
 - (e) Proposed time schedule for construction of new groundwater monitoring wells and implementation of groundwater monitoring.
- ii. Implementation – Upon concurrence by the Regional Water Board Executive Officer, the Permittee shall construct the new groundwater monitoring wells identified in the groundwater monitoring workplan.
- iii. Well Construction Report – The Permittee shall submit a well construction report within 60 days of completing well construction and initial monitoring of the new groundwater monitoring wells. The report shall include monitoring well boring logs, well construction diagrams, well casing and

water level elevations, a water level contour map, and sampling and analysis data.

IX. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. Average Monthly Effluent Limitation (AMEL)

The arithmetic mean of all samples collected in a calendar month, calculated as the sum of all samples in a calendar month divided by the number of samples. If only one sample is collected in a calendar month, that sample result will constitute the monthly average and daily maximum results for the purpose of determining compliance with effluent limitations.

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee will be considered out of compliance for that calendar month. The Permittee will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

C. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter,

the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitations

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

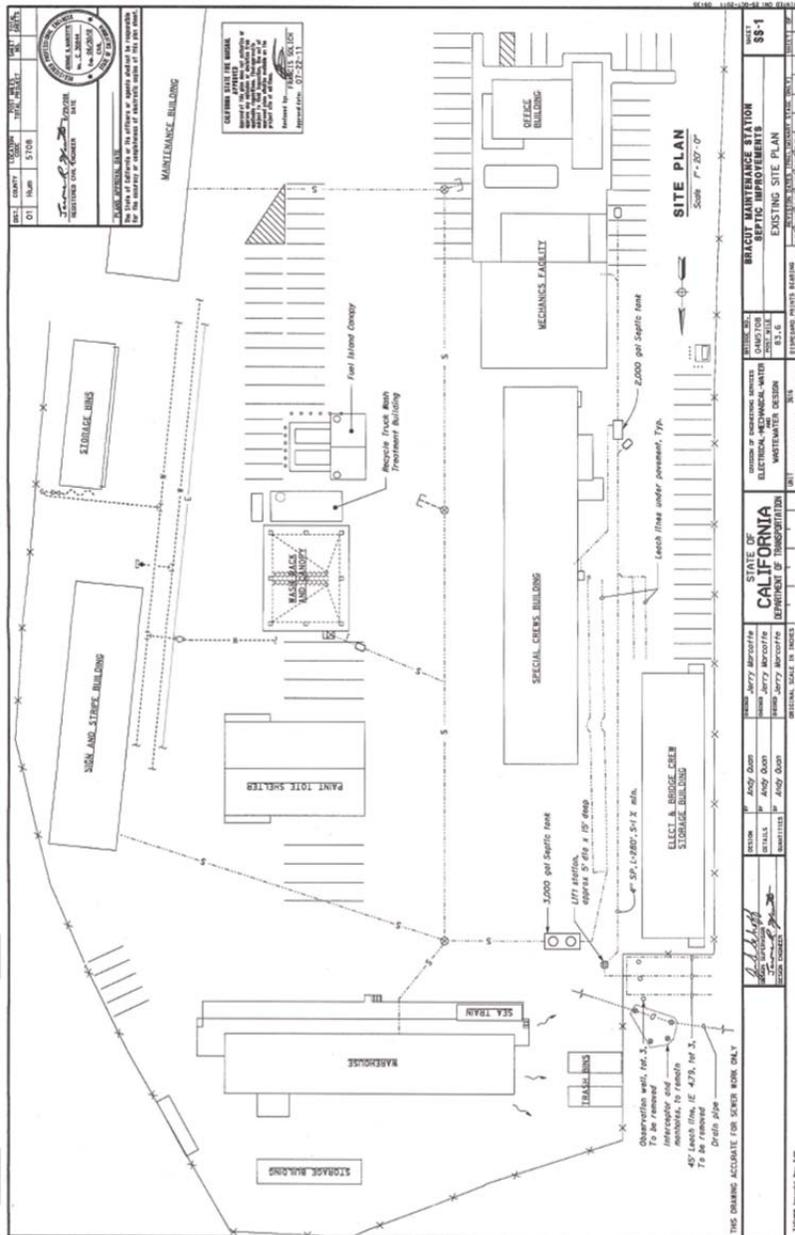
E. Instantaneous Maximum Effluent Limitations

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

F. Bacteriological Limitations

1. Median. The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the data set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.
2. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, this requirement shall apply to each weekly sample.

ATTACHMENT A – MAP



ATTACHMENT B- MONITORING AND REPORTING PROGRAM (MRP) NO. R1-2013-0019

Table of Contents

I. GENERAL MONITORING PROVISIONS.....	B-2
II. MONITORING LOCATIONS.....	B-2
III. MONITORING REQUIREMENTS.....	B-3
A. Monitoring Effluent – Monitoring Location EFF-001	B-3
IV. RECEIVING WATER MONITORING REQUIREMENTS.....	B-4
A. Groundwater Monitoring.....	B-4
V. REPORTING REQUIREMENTS	B-5
A. Self-Monitoring Reports (SMRs)	B-5
B. Other Reports	B-8
C. Spills and Overflows Notification.....	B-9

List of Tables

Table B-1	Monitoring Station Locations	B-3
Table B-2.	Effluent Monitoring – Monitoring Location EFF-001.....	B-3
Table B-3.	Groundwater Monitoring – Monitoring Wells.....	B-5
Table B-4.	Monitoring Periods and Reporting Schedule.....	B-6

ATTACHMENT B – MONITORING AND REPORTING PROGRAM (MRP) NO. R1-2013-0019

California Water Code sections 13267 and 13383 authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement California regulations.

I. GENERAL MONITORING PROVISIONS

- A.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.
- B.** Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (CDPH; formerly the Department of Health Services), in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.
- C.** Compliance and monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no minimum level (ML) value is below the effluent limitation, the lowest ML shall be selected as the reporting level (RL).

II. MONITORING LOCATIONS

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table B-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
---	INF-001	Untreated influent wastewater collected at the Facility at a representative point preceding primary treatment.
---	INT-001	Internal monitoring location for purposes of monitoring wastewater to demonstrate compliance with discharge specifications.
001	EFF-001	Treated wastewater prior to discharge to the leach field.
--	MW-1, MW-2, MW-3, etc.	Groundwater Monitoring Wells

III. MONITORING REQUIREMENTS

A. Monitoring Effluent – Monitoring Location EFF-001

- a. When discharging at Discharge Point 001, the Permittee shall monitor treated effluent at Monitoring Location EFF-001 as follows:

Table B-2. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow (Average Daily) ³	mgd	Meter	Continuous
pH	std units	Grab	Monthly
TPH as Gasoline	mg/L	Grab	Monthly
TPH as Diesel	mg/L	Grab	Monthly
TPH as Motor Oil	mg/L	Grab	Monthly
Benzene	mg/L	Grab	Monthly
Toluene	mg/L	Grab	Monthly

³ Flow monitoring may occur immediately upstream of primary treatment.

Table B-2. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Ethylbenzene	mg/L	Grab	Monthly
Xylene	mg/L	Grab	Monthly
MTBE	mg/L	Grab	Monthly
Cadmium	mg/L	Grab	Monthly
Chromium	mg/L	Grab	Monthly
Lead	mg/L	Grab	Monthly
Zinc	mg/L	Grab	Monthly
Nickel	mg/L	Grab	Monthly
Arsenic	mg/L	Grab	Monthly
EPA Method 8260	mg/L	Grab	Monthly
EPA Method 8270	mg/L	Grab	Monthly

- b. **Compliance.** Monitoring results shall demonstrate compliance with the effluent limitations as referenced in Effluent Limitations IV of the Order.
- c. **Reporting.** The Permittee shall report the results of daily, weekly and monthly monitoring.

IV. RECEIVING WATER MONITORING REQUIREMENTS

A. Groundwater Monitoring

- 1. The Permittee shall monitor groundwater at approved monitoring well locations as follows:

Table B-3. Groundwater Monitoring - Monitoring Wells

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.01 feet	Grab	2x / Year
pH	std units	Grab	2x / Year
TPH as Gasoline	mg/L	Grab	2x / Year
TPH as Diesel	mg/L	Grab	2x / Year
TPH as Motor Oil	mg/L	Grab	2x / Year
Benzene	mg/L	Grab	2x / Year
Toluene	mg/L	Grab	2x / Year
Ethylbenzene	mg/L	Grab	2x / Year
Xylene	mg/L	Grab	2x / Year
MTBE	mg/L	Grab	2x / Year
Cadmium	mg/L	Grab	2x / Year
Chromium	mg/L	Grab	2x / Year
Lead	mg/L	Grab	2x / Year
Zinc	mg/L	Grab	2x / Year
Nickel	mg/L	Grab	2x / Year
Arsenic	mg/L	Grab	2x / Year
EPA Method 8260	mg/L	Grab	2x / Year
EPA Method 8270	mg/L	Grab	2x / Year

V. REPORTING REQUIREMENTS

A. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Permittee to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Permittee shall submit hard copy SMRs to the Regional Water Board. The CIWQS Web site will provide additional directions for SMR submittal in the event of a service interruption for electronic submittal.
2. The Permittee shall submit monthly SMRs including the results for all monitoring specified in this MRP. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. All monitoring results shall include complete laboratory data sheets for each analysis and be submitted in conjunction with the monthly SMR.
4. Monitoring periods for all required monitoring shall be completed according to the following schedule:

Table B-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	May 2, 2013	All	First day of second calendar month following month of sampling
Daily	May 2, 2013	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	First day of second calendar month following month of sampling
Monthly	May 2, 2013	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Quarterly	May 2, 2013	January-March April-June July-September October-December	First day of second calendar month following the quarter of sampling
2X / Year	June 2, 2013	June and December	First day of second calendar month following month of sampling (August and February)
Annually	May 2, 2013	January 1 through December 31	March 1 each year

5. **Reporting Protocols.** The Permittee shall report with each sample result the applicable ML, the RL and the current MDL, as determined by the procedure in Standard Methods.

The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
6. **Self-Monitoring Reports.** The Permittee shall submit self-monitoring reports (SMRs) in accordance with the following requirements:
- a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations.
 - b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
 - i. Facility name and address;
 - ii. WDID number;
 - iii. Applicable period of monitoring and reporting;
 - iv. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);

- v. Corrective actions taken or planned; and
 - vi. The proposed time schedule for corrective actions.
- c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the General Provisions, to the address listed below:

**Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403**

B. Other Reports

1. **Annual Report.** The Permittee shall submit an annual report to the Regional Water Board for each calendar year. The report shall be submitted by March 1st of the following year. The report shall, at a minimum, include the following:
 - a. **Monitoring Data Summaries.** Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under section Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted in the SMR.
 - b. **Compliance Reporting.** A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.
 - c. **Contact Information.** The names and telephone numbers of persons to contact regarding the Facility for routine and emergency situations.
 - d. **Calibration Records.** A statement certifying when monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
 - e. **Operation and Maintenance (O&M) Manual and Spill Contingency Plan Review.** A statement certifying whether the current O&M manual and spill contingency plan reflect the wastewater treatment facility as currently constructed and operated, and the dates when those documents were last reviewed and last revised for adequacy.

- f. **Solids Handling and Disposal Activity Reporting.** The Permittee shall submit a description of the solids handling, disposal and reuse activities over the previous twelve months. At a minimum, the report shall contain:
- i. Annual solids production, in dry tons and percent solids.
 - ii. A schematic diagram showing solids handling facilities (e.g., thickeners, drying beds, etc.), if any, and a solids flow diagram.
 - iii. Methods of final disposal of solids:
 - (a) For any portion of solids discharged to a sanitary landfill, the Permittee shall provide the volume of solids transported to the landfill, the names and locations of the facilities receiving solids, the Regional Water Board's WDRs order number for the regulated landfill, and the landfill classification.
 - (b) For any portion of solids discharged through land application, the Permittee shall provide the volume of solids applied, the date and locations where solids were applied, the Regional Water Board's WDRs order number for the regulated discharge, a demonstration that the discharge was conducted in compliance with applicable permits and regulations, and, if applicable, corrective actions taken or planned to bring the discharge into compliance with WDRs.
 - (c) For any portion of solids further treated through composting, the Permittee shall provide a summary of the composting process, the volume of solids composted, and a demonstration and signed certification statement that the composting process and final product met all requirements for disposal.

C. Spills and Overflows Notification

1. All spills, unauthorized discharges, and sanitary sewer overflows (SSOs) equal to or in excess of 1,000 gallons or any size spill or SSO that result in a discharge to a drainage channel or a surface water:
 - a. As soon as possible, but not later than **two (2) hours** after becoming aware of the discharge, the Permittee shall notify the California Emergency Management Agency (CalEMA), the local health officer or directors of environmental health

with jurisdiction over affected water bodies or land areas, and the Regional Water Board.⁴

Information to be provided verbally to the Regional Water Board includes:

- i. Name and contact information of caller;
 - ii. Date, time and location of spill occurrence;
 - iii. Estimates of spill volume, rate of flow, and spill duration;
 - iv. Surface water bodies impacted, if any;
 - v. Cause of spill;
 - vi. Cleanup actions taken or repairs made; and
 - vii. Responding agencies.
- b. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of a discharge, the Permittee shall submit to the Regional Water Board a certification that CalEMA and the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas have been notified of the discharge. For the purpose of this requirement, "certification" means a CalEMA certification number and, for the local health department, name of local health staff, department name, phone number and date and time contacted.
- c. Within **five (5) business days**, the Permittee shall submit a written report to the Regional Water Board office. The report must include information provided in the verbal notification and additional information as follows:
- i. Other agencies notified by telephone and copies of reports submitted to other agencies;
 - ii. All available details related to the cause of the spill;
 - iii. Detailed description of cleanup actions and repairs taken; and
 - iv. Description of corrective actions that will be taken to minimize or prevent future spills.
- d. In the cover letter of the monthly report, the Permittee shall include a brief written summary of the event and any additional details related to the cause or resolution of the event, including, but not limited to results of any water quality monitoring conducted.

⁴ The contact number for spill reporting for the CalEMA is (800) 852-7550. The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to CalEMA will satisfy the 2 hour notification requirement for the Regional Water Board.

2. All spills, unauthorized discharges, and sanitary sewer overflows (SSOs) less than 1,000 gallons that do not reach a drainage channel or a surface water:
 - a. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of the discharge, the Permittee shall notify the Regional Water Board and provide the applicable information in requirement 1.a of this section.
 - b. In the cover letter of the monthly monitoring report, the Permittee shall include a written description of the spill event.

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ATTACHMENT C – FACT SHEET

Contents

I. FACILITY INFORMATIONC-2

 A. Background.....C-2

 B. General Facility InformationC-2

 C. Existing Wastewater Treatment FacilityC-2

 D. New Wastewater Treatment Facility.....C-3

II. FINDINGS.....C-3

 A. Legal AuthoritiesC-3

 B. Basin PlanC-3

 C. California Water CodeC-5

 D. California Code of Regulations (CCR)C-5

 E. Antidegradation PolicyC-5

 F. Endangered Species ActC-6

 G. Monitoring and Reporting.....C-6

III. RATIONALE FOR EFFLUENT LIMITATIONSC-6

ATTACHMENT C- FACT SHEET

I. FACILITY INFORMATION

A. Background

The California Department of Transportation (hereinafter Permittee) submitted a Report of Waste Discharge (ROWD), on June 15, 2011, and applied for waste discharge requirements to discharge up to 0.001 mgd ADWF of industrial treated wastewater from the California Department of Transportation, Bracut Maintenance Facility (hereinafter Facility) to land owned by the Permittee. The proposed wastewater treatment facility is designed to collect, treat and dispose of wastewater used to clean heavy equipment and work trucks including: front-end loaders, sanding trucks, street sweepers, pull broom trucks, paint trucks, roller trucks, and dump trucks.

B. General Facility Information

The Facility was constructed in 1965, comprises a total of 5.75 acres, and is located on a graded pad, at an elevation of approximately 23 feet above mean sea level. It is located on the margins of Humboldt Bay east of Highway 101. The site is generally flat and paved with asphaltic concrete. Storm water runoff is carried offsite through a network of swales and drainage inlets which discharge to a culvert to a tidal drainage gate. Underlying sediments consist of coarse-to fine-grained sediments which form a water table aquifer with seasonal high groundwater less than ten feet below ground surface. The Facility supports up to 52 staff.

C. Existing Wastewater Treatment Facility

The Facility has an existing vehicle wash rack which is designed as a closed-loop no discharge wash rack with recycling of the wastewater. The recycled wash water treatment system consists of a covered wash rack and a side interceptor trench that drains to a below ground clarifier. A pump located in the third compartment of the clarifier pumps the wastewater into an Aquacycle recycle process unit (RPU) system. The treated water from the RPU system is recycled and used in the pressure washer for subsequent vehicle cleaning. The existing RPU wastewater treatment system is not operating optimally due to high sediment load of very fine clay and colloidal soils endemic to the area.

D. New Wastewater Treatment Facility

The proposed treatment system includes a sedimentation basin with a nominal 24-hour retention time that flows to a 2000-gallon oil water separator/sand trap. A flocculent will be added to the sedimentation basin effluent to improve removal performance of fine-grained sediment. After the oil water separator/sand trap the wastewater will flow into a clarifier and finally to a granular activated carbon unit prior to discharge to soil absorption chambers in the leach field. The infiltration chambers will be installed underneath the pavement of the wash pads. The estimated flow through the wastewater treatment system is 1,000 gallons per day. Solids from the treatment units will be removed and disposed of at a permitted facility. The carbon filter is expected to be depleted and replaced every 6 to 7 months. The Permittee plans to install three groundwater monitoring wells and perform groundwater monitoring adjacent to the leach field areas. Attachment A provides a map of the area around the Facility.

II. FINDINGS

- A. Legal Authorities.** This Order serves as Waste Discharge Requirements (WDRs) for discharges to land issued pursuant to section 13263 of the California Water Code (Water Code).
- B. Basin Plan.** As required by Water Code section 13263(a), these WDRs are crafted to implement the Water Quality Control Plan for the North Coast Region (Basin Plan), and in so doing, the Regional Water Board has taken into consideration the beneficial uses to be protected, the water quality objectives (both numeric and narrative) reasonably required for that purpose, other (including previous) waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241. The Basin Plan contains implementation plans and policies for protecting waters of the basin. The Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

Thus, beneficial uses applicable to area groundwater within the Eureka Plain Hydrologic Unit to be protected are as follows:

1. Municipal and Domestic Supply (MUN)
2. Agricultural Water Supply (AGR)
3. Freshwater Replenishment to Surface Waters (FRSH)

The Facility is located adjacent to Humboldt Bay. The existing and potential beneficial uses of Humboldt Bay that are to be protected are as follows:

1. Municipal and Domestic Supply (MUN)
2. Agricultural Supply (AGR)
3. Industrial Service Supply (IND)
4. Process Water Supply (PRO)
5. Freshwater Replenishment (FRSH)
6. Navigation (NAV)
7. Hydropower Generation (POW)
8. Water Contact Recreation (REC-1)
9. Non-Contact Water Recreation (REC-2)
10. Commercial and Sport Fishing (COMM)
11. Cold Freshwater Habitat (COLD)
12. Wildlife Habitat (WILD)
13. Rare, Threatened, or Endangered Species (RARE)
14. Marine Habitat (MAR)
15. Migration of Aquatic Organisms (MIGR)
16. Spawning, Reproduction, and/or Development (SPWN)
17. Shellfish Harvesting (SHELL)
18. Estuarine Habitat (EST)
19. Aquaculture (AQUA)
20. Native American Culture (CUL)

C. California Water Code. The California Water Code (Water Code) establishes the authority for the Regional Water Board to establish water quality objectives, impose discharge prohibitions, and prescribe waste discharge and reclamation requirements. Water Code section 13241 requires each regional board to “establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...].” The control of pollutants discharged is established through effluent limitations and other requirements in WDR permits. Water Code section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted. Water Code section 13260 et seq establishes regulations associated with the prescription of waste discharge requirements and Water Code Chapter 7 (section 13500 et seq) establishes regulations associated with the prescription of reclamation requirements.

It is the Regional Water Board’s intent that this Order shall ensure attainment of water quality standards, applicable water quality objectives, and protection of beneficial uses of receiving waters. This Order therefore requires the Permittee to comply with all prohibitions, effluent limitations, discharge specifications, receiving water limitations, standard provisions, and monitoring and reporting requirements. The Order further prohibits discharges from causing violations of water quality objectives or causing conditions to occur that create a condition of nuisance or water quality impairment in receiving waters as a result of the discharge.

D. California Code of Regulations (CCR). The discharge authorized herein and the treatment and storage facilities associated with the discharge are exempt from the requirements of title 27, CCR, section 20005 et seq. The exemption, pursuant to section 20090(b) of title 27, allows for the exemption of discharges of wastewater if;

1. The applicable Regional Board has issued WDRs;
2. The discharge is in compliance with the applicable water quality control plan (Basin Plan); and
3. The wastewater does not need to be managed as a hazardous waste.

E. Antidegradation Policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, the State antidegradation policy.

The permitted discharge is consistent with the provisions of State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining

High Quality of Waters in California. This Order does not authorize any discharge which exceeds water quality objectives established for the protection of groundwater.

This Order is consistent with the maximum benefit to people of the State because it: (i) does not allow any discharge which exceeds water quality objectives; and (ii) monitors groundwater impacts from disposal of treated wastewater. Compliance with these requirements mandates the use of primary and secondary treatment technology which constitute best practicable treatment or control of the discharge.

- F. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097). The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.
- G. Monitoring and Reporting.** Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment B. The Executive Officer of the Regional Water Board is delegated the authority to modify the Monitoring and Reporting Program, as determined appropriate to protect water quality.

III. RATIONALE FOR EFFLUENT LIMITATIONS

- A.** Effluent limitations in this Permit are established to attain and maintain applicable numeric water quality criteria to protect the beneficial uses of the receiving water as established in the Basin Plan. The beneficial uses of groundwater include municipal, domestic and agricultural supply. Pollutants associated with wash rack facilities such as hydrocarbons, paint, solvents and metal-laden sediment may threaten the beneficial uses of groundwater in the area. The monitoring requirements listed in the Monitoring and Reporting Program are established to demonstrate compliance with effluent limitations and to meet water quality objectives in the Basin Plan. The table below sets out water quality objectives for constituents typically present in heavy equipment wash rack discharges:

Constituent	Practical Quantitation Limit ug/l	Water Quality Objective ⁵ ug/l	Reference for Objective
Trichloroethylene	< 0.5	1.7	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Tetrachloroethylene	< 0.5	0.06	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan

⁵ Practical quantitation limits are based on current technology. For instances where technology cannot achieve the water quality objective the practical quantitation limit will be used.

Cis-1,2-Dichloroethene	< 0.5	6	California Department of Health Services Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
Trans-1,2-dichloroethene	< 0.5	10	California Department of Health Services Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
1,1-Dichloroethylene	< 0.5	0.06	US EPA Health Advisory applied to the GENERAL water quality objective in the Basin Plan
Trichlorotrifluoroethane	< 0.5	150	California Department of Health Services Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
1,1,1-Trichloroethane	< 0.5	200	California Department of Health Services Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
Trichloromethane	< 0.5	1.1	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Bromodichloromethane	< 0.5	0.27	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Acetone	< 0.5	6300	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Methyl t-Butyl Ether	< 0.5	5	California Department of Health Services Secondary Maximum Contaminant Level applied to the TASTE and ODOR water quality objective in the Basin Plan
1,2,4-Trimethylbenzene	< 0.5	330	California Department of Health Services Notification Level applied to GENERAL water quality objective in the Basin Plan
1,3,5-Trimethylbenzene	< 0.5	15	Published literature provides a taste and odor threshold of 15 ug/l which is applied to the narrative TASTE AND ODOR water quality objective of the Basin Plan
sec-Butylbenzene	< 0.5	260	California Department of Health Services Notification Level applied to GENERAL water quality objective in the Basin Plan
tert-Butylbenzene	< 0.5	260	California Department of Health Services Notification Level applied to GENERAL water quality objective in the Basin Plan
n-Propylbenzene	< 0.5	260	California Department of Health Services Notification Level applied to GENERAL water quality objective in the Basin Plan
n-Butylbenzene	< 0.5	260	California Department of Health Services Notification Level applied to GENERAL water quality objective in the Basin Plan
Isopropylbenzene (Cumene)	< 0.5	0.8	Published literature provides a taste and odor threshold of 0.8 ug/l which is applied to the narrative TASTE AND ODOR water quality objective of the Basin Plan
4-isopropyl Toluene	< 0.5	none available	
Vinyl Chloride	< 0.5	0.05	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Pentachlorophenol	< 0.2	0.3	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
2, 3, 4, 6-Tetrachlorophenol	< 0.2	1.0	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan.
2, 4, 5-Trichlorophenol	< 0.2	1.0	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan.
2, 4, 6-Trichlorophenol	< 0.2	0.5	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Methanol	< 50	3500	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Phenylmercuric Acetate	< 0.2	0.6	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Gasoline	< 50	5.0	Published literature provides a taste and odor threshold of 5 ug/l which is applied to the narrative TASTE AND ODOR water quality objective of the Basin Plan
Diesel	< 50	100	US EPA health advisory of September 4, 1992, Suggested No Adverse Response Level (SNARL) applied to TASTE AND ODOR water quality objective in the Basin Plan
Motor Oil	< 175	175	US EPA health advisory Suggested No Adverse Response Level (SNARL) of 0.1 ug/l to 1.0 ug/l applied to GENERAL water quality objective in the Basin Plan

Furan	< 0.0001	7.0	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
2,3,7,8-TCDD (Dioxin) ⁶	< 0.0001	2.7 E-7	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Benzene	< 0.5	0.15	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Toluene	< 0.5	42	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan
Ethylbenzene	< 0.5	3.2	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Xylenes	< 0.5	17	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan
Acenaphthene	< 0.1	20	US EPA National Ambient Water Quality Criteria, Human Health and Welfare Protection applied to TASTE AND ODOR water quality objective in the Basin Plan.
Anthracene	< 0.1	2100	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Benz(a)Anthracene	< 0.1	0.04	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Benzo(b)Fluoranthene	< 0.1	0.04	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Benzo(k)Fluoranthene	< 0.1	0.04	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Benzo(a)Pyrene	< 0.1	0.0029	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Chrysene	< 0.1	0.04	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Dibenz(a,h)Anthracene	< 0.1	0.0085	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Fluoranthene	< 0.1	280	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Fluorene	< 0.1	280	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Indeno(1,2,3-c,d)Pyrene	< 0.1	0.04	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Naphthalene	< 1.0	21	Published literature provides a taste and odor threshold of 21 ug/l which is applied to the narrative TASTE AND ODOR water quality objective of the Basin Plan
Phenol	< 1.0	2100	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Pyrene	< 0.1	210	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Arsenic	< 2.0	0.0037	Cal/EPA Cancer Potency Factor applied to GENERAL water quality objective in the Basin Plan
Barium	< 2.0	1000	California Department of Health Services Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
Cadmium	< 2.0	0.04	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL

⁶ Toxicity equivalency factors (TEF) are used to determine the relative toxicity of chlorinated dibenzodioxin (CDD) and chlorinated dibenzofuran (CDF) congeners. The following table represents applicable isomer groups and their associated TEF.

Isomer Group	Toxicity Equivalence Factor	Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0	2,3,7,8 tetra CDF	0.1
2,3,7,8-penta CDD	0.5	1,2,3,7,8 penta CDF	0.05
2,3,7,8-hexa CDD	0.1	2,3,4,7,8 penta CDF	0.5
2,3,7,8-hepta CDD	0.01	2,3,7,8 hexa CDF	0.1
octa CDD	0.001	2,3,7,8 hepta CDF	0.01
		octa CDF	0.001

			water quality objective in the Basin Plan
Chromium (Total)	< 2.0	50	California Department of Health Services Maximum Contaminant Level applied to TOXICITY water quality objective in the Basin Plan
Chromium (VI)	< 0.006	0.06	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Copper	< 2.0	300	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Iron	< 2.0	300	California Department of Health Services Secondary Maximum Contaminant Level applied to the TASTE & ODOR water quality objective in the Basin Plan
Lead	< 0.2	0.2	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Manganese	< 2.0	50	California Department of Health Services Secondary Maximum Contaminant Level applied to the GENERAL water quality objective in the Basin Plan
Mercury	< 0.2	1.2	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Nickel	< 2.0	12	California Public Health Goal (PHG) in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Zinc	< 2.0	2100	US EPA Integrated Risk Information System (IRIS) Reference Dose applied to GENERAL water quality objective in the Basin Plan
Phenanthrene	<0.1	None available	
1,1 Dichloroethane	<0.5	3	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
1,2 Dichloroethane	<0.5	0.4	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
1,1,2 Trichloroethane	<0.5	0.3	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Ethylene dibromide 1,2-dibromoethane EDB	<0.01	0.01	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Tert-Butyl-alcohol t-butyl alcohol TBA	<0.5	12	California Notification Level in Drinking Water (Department of Health Services) applied to GENERAL water quality objective in the Basin Plan
1,2,3-Trichloropropane	<0.0007	0.0007	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan
Bromate	<0.05	0.1	California PHG in Drinking Water (Office of Environmental Health Hazard Assessment) applied to GENERAL water quality objective in the Basin Plan