

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. 92-11037

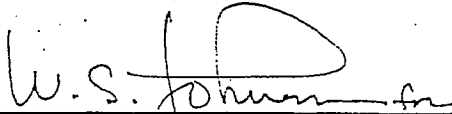
NOTICE OF APPLICABILITY  
FOR  
VALLEY WASTE DISPOSAL COMPANY  
FEE 34 FACILITY, EDISON OIL FIELD  
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The Board adopted General Order No. 92-110 on 29 May 1992 that prescribes waste discharge requirements for the discharge of oil production wastewater to sumps in the Edison oil field.
2. Valley Waste Disposal Company operates an oil production wastewater discharge facility in the SW 1/4 of the SW 1/4 of Section 34, ~~D05~~ 7295, R29E, MDB&M. The wastewater storage facility is in a vineyard area adjacent to the No. 18 oil well, as shown on the 1991 Munger Oil Field Map Book. The facility consists of six sumps. Wastewater is transported to the facility by pipeline from various oil leases throughout the Edison oil field. Crude oil is stored in two oil recovery sumps until shipment offsite. The treated wastewater is stored in three gunite-lined sumps and eventually pumped via pipeline to Valley Waste's Race Track facility for disposal. There is one unlined contingency sump for storage of excess wastewater. Dimensions of the impoundments range from approximately 30' x 50' to 120' x 180'. The sumps are approximately 10' to 15' deep.
3. When in operation, up to 5000 barrels/day of wastewater are discharged to the sump(s). A chemical analysis of the wastewater indicates the following characteristics: 7900  $\mu$ mhos/cm electrical conductivity, 4450 mg/l chloride, and 15.6 mg/l boron.

IT IS HEREBY ORDERED that Valley Waste Disposal Company, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the prescribed requirements of General Order No. 92-110.

I, WILLIAM H. CROOKS, 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, Central Valley Region, on 29 May 1992.

  
WILLIAM H. CROOKS, Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

GENERAL ORDER NO. 92-110

WASTE DISCHARGE REQUIREMENTS  
FOR  
EDISON OIL FIELD OPERATORS  
OIL PRODUCTION WASTEWATER DISCHARGES  
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The Edison oil field is on the eastern side of the Tulare Lake Basin, approximately four miles southeast of Bakersfield, as shown in Attachment A. The field comprises an area of approximately 30 square miles.
2. Crude oil production operators (hereafter Dischargers) use surface impoundments, generally known to the industry as sumps, at various oil lease production facilities in the oil field. The sumps are used for the separation of crude oil and produced wastewater, storage, and wastewater disposal by means of evaporation and percolation.
3. The sumps are either unlined or contain concrete liner material that does not meet the prescriptive construction criteria for classified waste management units as specified in Title 23, California Code of Regulations, Sections 2510 et seq. (Chapter 15).
4. The discharges are either not regulated or are presently governed by waste discharge requirements which are neither adequate nor consistent with current regulations and policies of the Board.
5. The Board may prescribe requirements for any discharge, in accordance with Section 13263 of the California Water Code.

**AREA DESCRIPTION**

6. The Edison oil field lies within the South Valley Floor Hydrologic Unit as depicted on interagency hydrologic maps prepared by the Department of Water Resources, August 1986.
7. The area receives approximately 5.85 inches of rainfall annually, as measured from the National Weather Service Station at the Bakersfield Airport, approximately seven miles northwest of the area. Evaporation in the area is approximately 68 inches annually.
8. There is no major surface drainage within the Edison oil field. The area receives runoff from Caliente Creek, an ephemeral drainage to the east, only in direct response to infrequent storms of high intensity.

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9. Depth to ground water within the Edison oil field ranges from approximately 300 feet in the southwest to greater than 400 feet in the northeast part of the field. Ground water movement is generally to the southwest.
10. The ground water is of excellent to good quality with the following average characteristics:

<u>Constituent</u>	<u>Units</u>	<u>Measured Average Value</u>
Specific Electrical Conductance @ 25°C	μmhos/cm	731
Total Dissolved Solids	mg/l	580
Chloride	mg/l	85
Boron	mg/l	0.24

11. The beneficial uses of underlying ground water are domestic, industrial, and agricultural supply. Ground water is primarily used for agriculture.
12. Soils in the area generally range from well-drained, permeable sand and silty sand in the southwest portion of the field to silty sand and clay with fairly well developed claypan horizons to the northeast. Underlying the soil horizon is 200 to 300 feet of recent alluvial fan sediment, which consists primarily of gravel, gravelly sand, and sand of high permeability.

**BASIN PLAN**

13. The Board adopted a Water Quality Control Plan for the Tulare Lake Basin (5D), hereafter "Basin Plan". These requirements implement the Basin Plan.
14. The Basin Plan policy on oil field wastewater disposal states that all sumps overlying the ground water body shall protect present beneficial uses and not degrade ground water.

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15. The Basin Plan contains the following maximum salinity limits for oil field wastewater in sumps overlying usable ground water:

<u>Constituent</u>	<u>Units</u>	<u>Measured Value</u>
Specific Electrical Conductance @ 25°C	μmhos/cm	1000
Chloride	mg/l	200
Boron	mg/l	1

16. The Basin Plan encourages the reclamation and beneficial reuse of wastewater discharges to land and surface waters.
17. In accordance with Basin Plan Amendment, Resolution No. 82-136, the Regional Board may allow discharges of oil field wastewater that is in excess of maximum salinity limits to unlined sumps, stream channels, and surface waters where the Discharger has demonstrated to the Board in public hearing that the proposed discharge will not substantially affect water quality nor cause a violation of water quality objectives.

**WASTEWATER CHARACTERIZATION AND DISPOSAL ALTERNATIVES**

18. Wastewater from oil producing zones in the Edison field is generally high in inorganic salts and has the following range of characteristics:

<u>Constituent</u>	<u>Units</u>	<u>Measured Value Range</u>
Specific Electrical Conductance @ 25°C	μmhos/cm	750 - 19,500
Chloride	mg/l	85 - 2,400
Boron	mg/l	0.2 - 12.5

19. Alternatives to oil field production wastewater discharges to sumps include on-site collection of wastewater in tanks and subsequent disposal of wastewater at an approved waste disposal facility or subsurface injection of wastes into approved Class II injection wells pursuant to Title 14, California Code of Regulations, Section 1724 et seq.

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20. These requirements will allow the Dischargers to achieve compliance with current state regulations and policy regarding the discharge of oil field produced wastewater to land. The method of achieving compliance will be at the Discharger's discretion.

LEGAL REFERENCES

21. The action to adopt or update waste discharge requirements for existing facilities is exempt from the provisions of the California Environmental Quality Act, in accordance with Title 14, California Code of Regulations (CCR), Section 15301.
22. The Board has notified affected dischargers and interested agencies and persons of its intent to prescribe general waste discharge requirements for these operations and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
23. The Board, in a public meeting, heard and considered all comments pertaining to this order.

IT IS HEREBY ORDERED that Dischargers who are issued a Notice of Applicability of this General Order to their facility, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions:

1. Discharge of wastes to surface waters or drainage courses is prohibited.
2. Discharge from a surface impoundment except as authorized by this Order is prohibited.
3. Discharge of wastes other than wastewater generated during the production of crude oil is prohibited.
4. Bypass or overflow of untreated or partially treated waste is prohibited.
5. Creation of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code, is prohibited.

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6. Discharge of hazardous waste, as defined in Chapter 15, Section 2521(a), is prohibited.
7. Discharge of wastes within 100 feet of surface water drainage courses is prohibited.

**B. Discharge Specifications:**

1. Wastewater effluent discharge to sumps that do not meet the prescriptive construction criteria for classified waste management units as specified in Chapter 15 shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Specific Electrical Conductance @ 25°C	µmhos/cm	1000
Chloride	mg/l	200
Boron	mg/l	1.0

2. Dischargers with wastewater effluent in excess of the numerical limitations established in Discharge Specification B.1 shall submit a plan for achieving compliance with this Order in accordance with the time schedule in Provision C.8. Plans are subject to concurrence by the Executive Officer and include but are not limited to the following:
  - a. Design of a wastewater system to treat the wastewater to meet the numerical limitations of Discharge Specification B.1.
  - b. Retrofit the sumps to comply with the current Chapter 15 construction standards for Class II surface impoundments; install monitoring systems in accordance with Article 5 of Chapter 15; and establish assurance of financial responsibility for closure, and for initiating and completing corrective action for all known and reasonably foreseeable releases from the surface impoundments, in accordance with Articles 5 and 8 of Chapter 15.
  - c. Demonstrate to the Board in public hearing that the proposed discharge will not substantially affect water quality or cause a violation of water quality objectives in accordance with Resolution No. 82-136.

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- d. Collection of wastewater in above ground tank(s) and subsequent disposal to an approved disposal facility or Class II injection well(s), and closure of the impoundments in accordance with Section 2582 of Chapter 15.
3. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
4. Sumps shall be free of oil coatings, or shall be covered or screened to preclude entry of bird or animal life.
5. The facility shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. A minimum of two feet of freeboard shall be maintained in the sumps.

**C. Provisions:**

1. The Discharger shall, in a timely manner, remove any wastes discharged at this facility in violation of this Order, and dispose of the wastes in an appropriate manner.
2. At the facility, the Discharger shall post in a conspicuous location, a clearly visible, legible, permanently affixed sign with the name of the owner or operator, and name of the facility.
3. Where appropriate, a copy of this Order shall be kept at the facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger shall comply with the attached Monitoring and Reporting Program No. 92-110, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
5. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which is part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
6. In the event of any change of owner or operator of the waste discharge facility, the Discharger shall promptly notify the succeeding owners or operators of their waste discharge requirements in writing, a copy of which shall be immediately forwarded to this

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office. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. The Board will review this Order periodically and will revise these requirements when necessary.

TIME SCHEDULE

8. Dischargers with wastewater discharges that exceed the numerical water quality limitations of Discharge Specification B.1 shall comply with the following time schedule for compliance with this Order:

<u>Task Description</u>	<u>Due Date<sup>1/</sup></u>
Submit Compliance Plan in accordance with Discharge Specification B.2	12 months
Compliance Progress Report	24 months
Compliance Progress Report	36 months
Achieve Compliance	48 months

<sup>1/</sup> All compliance due dates are initiated as of the date the Notification of Applicability Order is issued to the Discharger by the Executive Officer.

9. All Dischargers subject to Provision C.8 shall submit to the Board on or before the Compliance Progress Report due dates, a report detailing progress toward implementation of its compliance plan submitted in accordance with Discharge Specification B.2. The Discharger shall report any delay in implementation of the compliance plan and reason(s) for the delay.

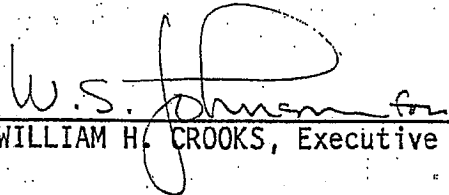


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10. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a General Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 29 May 1992.

  
WILLIAM H. CROOKS, Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 92-110  
FOR  
EDISON OIL FIELD OPERATORS  
OIL PRODUCTION WASTEWATER DISCHARGES  
KERN COUNTY

**EFFLUENT MONITORING**

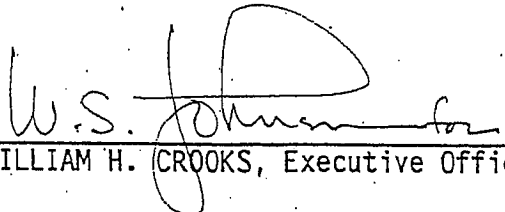
A sampling station shall be established where a representative grab sample of the effluent can be obtained. Samples shall be collected just prior to discharge to the sumps. Effluent samples should be representative of the volume and nature of the discharge. The following shall constitute the effluent monitoring program:

<u>Constituent</u>	<u>Units</u>	<u>Sampling Frequency</u>
Specific Electrical Conductance @ 25°C	$\mu$ mhos/cm	Annually
Chloride	mg/l	Annually
Boron	mg/l	Annually

**REPORTING**

In reporting the monitoring data, the Discharger shall clearly indicate the monitoring and reporting program number and name of the facility on the front of the report. The Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. If the Discharger monitors any pollutant at the facility more frequently than is required by this Order, or is unable to monitor due to lack of discharge at the facility, the Discharger shall notify the Regional Board in the next annual discharge monitoring report.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3. The Discharger shall implement this monitoring program on the first day of the month following the date of Notification of Applicability by the Executive Officer.

  
WILLIAM H. CROOKS, Executive Officer

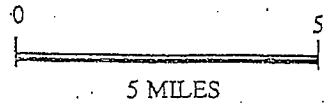
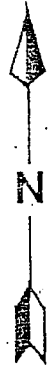
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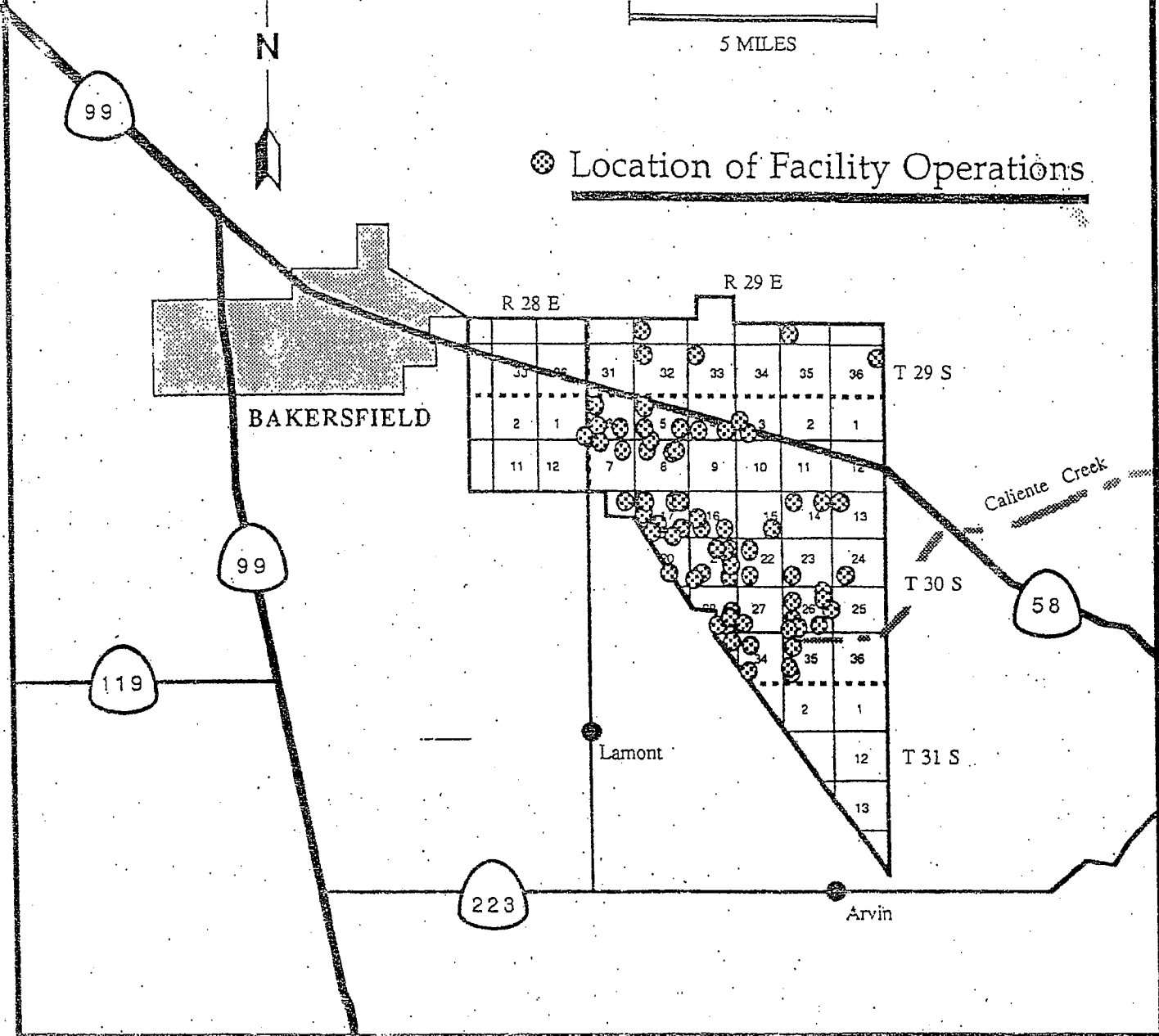
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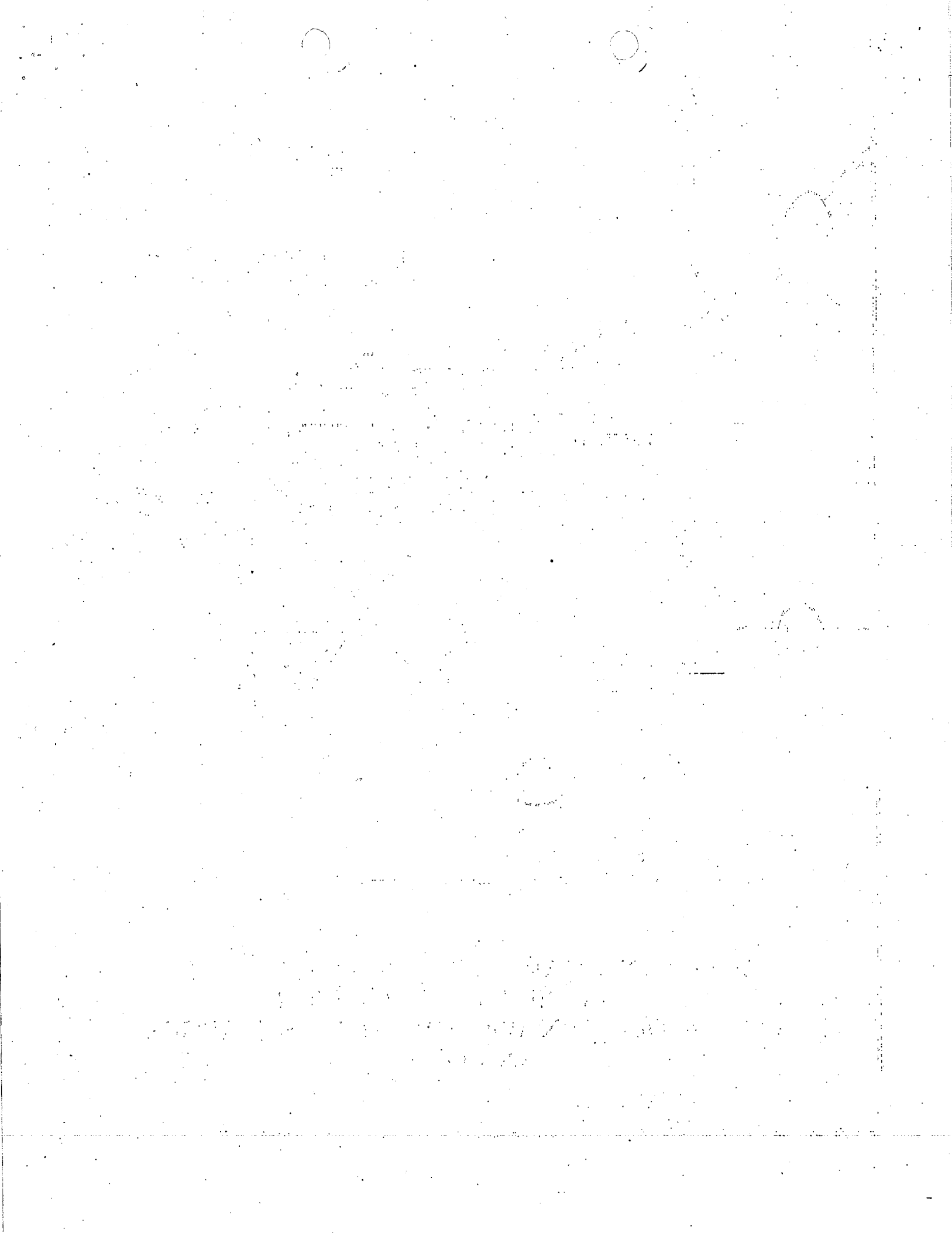


⊗ Location of Facility Operations



GENERAL ORDER  
WASTE DISCHARGE REQUIREMENTS FOR  
EDISON OIL FIELD OPERATORS  
OIL PRODUCTION WASTEWATER DISCHARGES  
KERN COUNTY

ATTACHMENT A



## INFORMATION SHEET

### EDISON OIL FIELD OPERATORS OIL PRODUCTION WASTEWATER DISCHARGES KERN COUNTY

The Edison oil field is on the eastern side of the Tulare Lake Basin, southeast of Bakersfield in Kern County. It encompasses an area of about 30 square miles.

There are approximately 70 oil field operators of record in the Edison oil field. Primary methods of wastewater disposal include discharge to sumps, piping the wastewater to the Valley Waste Disposal Company's Race Track Hill facility, and injection wells. There are 80 oil production facilities with sumps used for the separation of crude oil and wastewater, storage, and/or the disposal of produced wastewater by percolation and evaporation. Nearly one-half million gallons per day are discharged to sumps.

Wastewater from oil producing zones in the Edison field is generally high in inorganic salts and has the following range of characteristics:

<u>Constituent</u>	<u>Units</u>	<u>Measured Value Range</u>
Specific Electrical Conductance @ 25°C	$\mu$ mhos/cm	750 - 19,500
Chloride	mg/l	85 - 2,400
Boron	mg/l	0.2 - 12.5

The sumps do not meet the prescriptive construction criteria for classified waste management units as specified in Chapter 15 regulations. The discharges are either not regulated or presently governed by waste discharge requirements which are neither adequate nor consistent with current regulations and policies of the Board.

Soils in the area generally range from well-drained, permeable sands and silty sands in the southwest portions of the field to silty sands, and clays with fairly well developed claypan horizons to the northeast. Underlying the soil horizon is 200 to 300 feet of recent alluvial fan sediments, which consist primarily of discontinuous deposits of gravel, gravelly sand, and sand of high permeability. The recent alluvium is underlain by 800 to 4,700 feet of interbedded, loosely consolidated, non-marine sandstone, siltstone, and claystone.

Unconfined ground water is found primarily within gravel and sand of the Kern River-Chanac Series at depths from 300 feet in the southwest portion to greater than 400 feet in the northeast part of the field. Ground water movement is generally to the southwest.

INFORMATION SHEET - Continued

EDISON OIL FIELD OPERATORS  
OIL PRODUCTION WASTEWATER DISCHARGES  
KERN COUNTY

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Ground water in the area is used extensively for agriculture, and to a lesser extent for domestic and industrial uses. The ground water is of excellent to good quality with the following average characteristics:

<u>Constituent</u>	<u>Units</u>	<u>Average Value</u>
Specific Electrical Conductance @ 25°C	µmhos/cm	731
Total Dissolved Solids	mg/l	580
Chloride	mg/l	85
Boron	mg/l	0.24

The Basin Plan includes a section entitled, "Policy on Oil Field Wastewater Disposal" which contains maximum salinity limits for oil field wastewater. Wastewater analyses indicate most discharges do not meet the Basin Plan objectives.

These requirements direct those Dischargers in noncompliance with salinity limitations to achieve compliance in accordance with a time schedule. The time schedule requires submittal of a plan and compliance with the requirements within 18 months.

The action to adopt new or updated requirements for existing facilities is exempt from the provisions of the California Environmental Quality Act in accordance with Title 14, California Code of Regulations (CCR), Section 15301.

Individual dischargers will be subject to this General Order when the Board has adopted a Notification of Applicability Order for each Discharger's facility, as described in the Order.

This General Order and individual Notice of Applicability Orders were developed to expedite the preparation and issuance of new and updated WDRs to oil production wastewater dischargers who either do not have WDRs or have WDRs that are outdated and do not reflect current regulations and policies of the Board.

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