

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0080

WASTE DISCHARGE REQUIREMENTS
FOR
EXXONMOBIL PRODUCTION COMPANY
HILL LEASE, SOUTH BELRIDGE OIL FIELD
KERN COUNTY

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

1. ExxonMobil Production Company, a subsidiary of ExxonMobil Corporation, which is a corporation organized and existing under the laws of the State of New Jersey (hereafter Discharger), owns and operates crude oil production wells and associated facilities at the Hill Lease in the South Belridge Oil Field. The South Belridge Oil Field is on the west side of the San Joaquin Valley, approximately 35 miles west of the city of Bakersfield, in Kern County.
2. The Discharger's wastewater disposal facility consists of four unlined surface impoundments. Wastewater has been discharged to the impoundments since the 1950's. The discharge is not currently regulated by Waste Discharge Requirements (WDRs).
3. The Discharger submitted a Report of Waste Discharge and fee on 28 May 1998.
4. These WDRs are to regulate the discharge to unlined impoundments of non-hazardous produced water and water treatment plant backwash water resulting from the Dischargers' oil field production.
5. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition - 1995* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

LOCATION AND DESCRIPTION

6. The Hill Lease consists of approximately 480 acres in the N ½ and SW ¼ of Section 19, T28S, R21E, MDB&M (Assessor Parcel No. 085-210-10-2). The facility is as shown on Attachments A and B which are attached to and made part of this Order.
7. The impoundments cover approximately 17.5 acres on the lease. Approximately 4,300 barrels/day (180,000 gallons/day) of wastewater are discharged to the impoundments for disposal by solar evaporation and percolation.
8. The impoundments are unlined and do not meet the prescriptive construction criteria for Class II surface impoundments as specified in Title 27, California Code of Regulations, Section 20005, et seq (hereafter Title 27).

9. Land within the area is covered with predominantly native grass and shrub vegetation. Land use consists of oil and gas production and exploration.
10. The South Belridge Oil Field lies on the Antelope Plain, an alluvial piedmont consisting of coalescing alluvial fans from the Temblor Range to the west.
11. The site is in the South Valley Floor Hydrologic Unit, Antelope Plain Hydrologic Area (No. 558.60), as depicted on interagency hydrogeologic maps, prepared by the Department of Water Resources in August 1986.
12. The climate in the area is semi-arid, with hot, dry summers and cool winters. Available weather data through 1997 from a monitoring station at South Belridge indicates the average annual precipitation is 5.96 inches. The annual Class A pan evaporation rate is approximately 108 inches at Lost Hills.
13. The 100-year and 1000-year, 24-hour precipitation events calculated by the California Department of Water Resources are 2.53 inches and 3.32 inches, respectively, for the South Belridge monitoring station based on data through 1997.
14. An unnamed intermittent stream channel traverses the Hill Lease immediately to the north of the facility and terminates approximately 1.5 miles to the east in the vicinity of Highway 33. Overflow from the impoundments has the potential to enter the channel. Natural flow in the channel occurs during infrequent storm events.
15. Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Number 060075 0675 B, dated 26 September 1986, shows the north edge of the impoundments are within the 100- year floodplain.
16. The stream channel is defined as a Valley Floor Waters in the Basin Plan. The beneficial uses include agricultural supply; industrial service and process supply; water contact and non-contact water recreation; warm freshwater habitat; wildlife habitat; rare and endangered species habitat; and groundwater recharge.

HYDROGEOLOGIC INFORMATION

17. The facility is located in an area where hydrogeologic information is limited. The Discharger is conducting an investigation to evaluate groundwater conditions at the Hill Lease.
18. At the Hill Lease, sediments of Holocene age consist of three stratigraphic units. The youngest unit is Alluvium, which consists of alternating sand, silt, and clay. Underlying the Alluvium is the 22K sand. Below the 22K sand is the Corcoran Clay Equivalent, which was deposited on the underlying Tulare Formation of Pleistocene age.

19. A regional unconformity is at the base of the Tulare Formation. Above the unconformity, the Tulare Formation and the Holocene sediments gently dip and thicken to the east-northeast towards the San Joaquin Valley. Below the unconformity, the Belridge Diatomite, which is Pliocene in age, is strongly folded with the axis extending through the middle of the Hill Lease in a northwest-southeast direction.
20. Preliminary information indicates that the site geology does not preclude wastewater from migrating to the northeast, towards useable groundwater aquifers in the San Joaquin Valley.
21. At the Hill Lease, oil and wastewater is produced from the Belridge Diatomite and the Tulare Formation. The shallowest production is in the Tulare Formation at a depth of approximately 600 feet.
22. At the Hill Lease, the Discharger operates eight Class II injection disposal wells permitted by the California Division of Oil, Gas, and Geothermal Resources to inject wastewater into the Tulare Formation. During 2003, the Discharger reported 1,576,856 barrels of wastewater were injected into five disposal wells.
23. No known Holocene faults traverse or are projected through the area. The nearest known Holocene fault is the San Andres Fault zone, located 12 miles southwest of the site.

GROUNDWATER INFORMATION

24. The nearest groundwater supply wells are in Spicer City (Section 10, T28S, R22E), approximately 8.5 miles east-northeast of the Hill Lease.
25. The beneficial uses of groundwater beneath the area, as designated by the Basin Plan, are municipal and domestic supply (MUN), agriculture supply (AGR), and industrial service supply (IND). There are no municipal, domestic, agricultural, or industrial supply wells in the area.
26. To protect the beneficial uses of groundwater and to prevent its degradation, the Basin Plan contains maximum salinity limits for the disposal of petroleum production wastewater in unlined impoundments overlying groundwater with existing and future probable beneficial uses. The maximum limits are:

<u>Parameter (units)</u>	<u>Maximum Concentration</u>
Electrical Conductivity @ 25°C (µmhos/cm)	1,000
Chloride (mg/L)	200
Boron (mg/L)	1

27. The Discharger installed monitoring wells MW-1 and MW-2 in an area east-northeast of the impoundments and MW-A to the south of the impoundments (Attachment B). The first water-bearing zone was encountered in the Alluvium at a depth of approximately 180 feet in MW-1; 175 feet in MW-2; and, 165 feet in MW-A.

28. Groundwater samples were collected and had the following chemical characteristics:

<u>Parameter (units)</u>	<u>Concentration</u>		
	MW-1	MW-2	MW-A
Electrical Conductivity @ 25°C (µmhos/cm)	22,000	29,000	11,000
Total Dissolved Solids (mg/L)	14,000	17,000	7,200
Chloride (mg/L)	6,800	7,700	2,200
Boron (mg/L)	29	14	2.5

29. The chemical characteristics of the water sample from MW-A is representative of background groundwater conditions. The chemical characteristics of the water samples from MW-1 and MW-2 indicate that groundwater in the Alluvium has been impacted by wastewater migrating from the unlined impoundments. Impacted groundwater extends to the northeast of the impoundments for at least 1,500 feet. Additional information is being collected by the Discharger to delineate the lateral extent of the wastewater impacts.
30. The “Sources of Drinking Water” policy, which was added to the Basin Plan in 1988, provides that all groundwater in the Tulare Lake Basin is considered to be suitable or potentially suitable for municipal or domestic water supply, and should be so designated by the Regional Board with certain exceptions. One of those exceptions is for groundwater that has a TDS concentration exceeding 3,000 mg/L (or an EC level exceeding 5,000 µmhos/cm) and is not reasonably expected to supply a public water system.

WASTEWATER CHARACTERISTICS AND CLASSIFICATION

31. More than 1,500,000 barrels of non-hazardous wastewater (produced water and water softener filter backwash) is discharged to the impoundments annually. The salinity concentrations in the wastewater exceed the maximum salinity limits contained in the Basin Plan for discharges to unlined impoundments. Recent and historical analytical results indicate that wastewater in the impoundments has the following characteristics:

<u>Parameters (units)</u>	<u>Concentration</u>
Electrical Conductivity @ 25°C (µmhos/cm)	35,000
Total Dissolved Solids (mg/L)	19,000
Chloride (mg/L)	11,000
Boron (mg/L)	69

32. Nonhazardous waste that contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state is defined in California Water Code, §13173 (b) as “Designated Waste.” The wastewater exceeds applicable water quality objectives and has the potential to affect beneficial uses of waters of the state and, therefore, is classified as designated waste

33. Wastewater with salinity concentrations that exceed maximum limits described in Finding No. 26 is being discharged to unlined impoundments. This Order contains a compliance schedule to provide the Discharger with sufficient time to complete the hydrogeologic investigation and implement a wastewater disposal program consistent with current state regulations and policy. The method of achieving compliance will be at the Discharger's discretion.
34. Impoundments used at the Hill Lease for disposal of wastewater classified as designated waste must be constructed in accordance with prescriptive criteria for Class II surface impoundments as specified in Title 27. Title 27 also requires groundwater and vadose zone monitoring, and assurance of financial responsibility for closure and for initiating and completing corrective action for all known or reasonably foreseeable releases from the impoundments.
35. Alternatives to the discharge of wastewater to unlined impoundments include: (a) discharge to impoundments that are constructed in accordance with Title 27, or (b) disposal of wastewater at a permitted waste disposal facility; or, (c) subsurface injection into approved Class II injection well(s) pursuant to Title 14, California Code of Regulations, §1724, et seq.

CEQA AND OTHER LEGAL REFERENCES

36. The action to adopt WDRs for existing facilities is exempt from the provisions of the California Environmental Quality Act (Public Resources Code 21000, et seq.), in accordance with Title 14, California Code of Regulations, Section 15301.
37. This Order requires the Discharger to submit technical reports as authorized under CWC Section 13267(b)(1), which states in part:

“In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”
38. The technical reports required by this Order and the attached “Monitoring and Reporting Program No. R5-2004-0080” are necessary to assure compliance with these WDRs. The Discharger operates the facility that discharges the waste subject to this Order.
39. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) general industrial stormwater permit, provided the facility has not experienced a reportable spill since 19 November 1987. It is the responsibility of the Discharger to comply with

United States Environmental Protection Agency federal stormwater regulations (40 CFR Parts 122, 123, and 124) should the facility not qualify for exemption.

40. This Order is consistent with the antidegradation provisions of State Water Resources Control Board Resolution 68-16. Provided the Discharger complies with the Order, discharges in the future should not cause adverse impacts on groundwater.

PROCEDURAL REQUIREMENTS

41. The Regional Board has notified the Discharger, interested agencies, and persons of its intent to prescribe WDRs for this discharge and has provided them with an opportunity to submit their written views and recommendations.
42. The Regional Board, in a public meeting, heard and considered all comments pertaining to this proposed Order.
43. Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action. The petition must be received by the State Board within 30 days of the date of issuance of this Order. Copies of the law and regulations applicable to filing petitions are available at http://www.swrcb.ca.gov/water_laws and will be provided upon request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that ExxonMobil Production Company, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and plans, policies, and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The acceptance, treatment, or discharge of “hazardous waste” is prohibited. For purposes of this Order, the term “hazardous waste” is as defined in Title 23, California Code of Regulations, §2510, et seq.
2. Discharges of waste to surface water or surface water drainage courses are prohibited.
3. The discharge of waste other than wastewater associated with the production of crude oil described in Finding No. 4 is prohibited.

B. SPECIFICATIONS

1. Wastewater that has been classified as “Designated Waste” shall be discharged in a manner that complies with current state regulations and policy. Impoundments used for disposal of designated waste shall be lined and constructed in accordance with prescriptive criteria for Class II surface impoundments as specified in Title 27.

2. Wastewater shall only be discharged into, and shall be confined to, the impoundments described in Finding No. 2.
3. The impoundment berms shall be designed and maintained to prevent seepage or leakage caused by erosion, slope failure, or animal burrowing.
4. The impoundments shall have sufficient freeboard to prevent overtopping as a result of successive precipitation events, high velocity winds, or seismic shaking. In no case shall there be less than two feet (measured vertically) of freeboard.
5. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the impoundments.
6. The impoundments shall either be free of oil or effectively netted to preclude entry of wildlife in accordance with Title 14, CCR, §1770 (b) (3).
7. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
8. The Discharger shall operate and maintain the wastewater impoundments in a manner that prevents liquids, precipitates, and sludges from concentrating to hazardous levels.
9. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, §13050.

C. PROVISIONS

1. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2004-0080, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
2. The Discharger shall comply with those applicable sections of the "*Standard Provisions and Reporting Requirements for Waste Discharge Requirements*" (Standard Provisions) dated August 1997, which are attached to, and by reference, a part of this Order. To the extent that the Standard Provisions are inconsistent with any terms, conditions, or requirements in this Order, this Order shall govern.
3. In the event of any change in control or ownership of the wastewater disposal facility, then the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall also be forwarded to this office, at least 14 days in advance of the change in control or ownership.

4. To assume ownership or operation of the wastewater disposal facility under this Order, the succeeding owner or operator must apply in writing to the Regional Board requesting transfer of the Order within 14 days of assuming ownership or operation of the facility. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name, address, and telephone number of the persons responsible for contact with the Regional Board, and a statement that the new owner or operator assumes full responsibility for compliance with this Order. The request must comply with the signatory requirements of this Order. Failure to submit the request shall be considered a discharge without requirements, which is a violation of the California Water Code. Transfer of this Order to a succeeding owner or operator shall be approved or disapproved by the Regional Board.
5. The Discharger shall maintain a copy of this Order and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel upon request.
6. The Discharger shall immediately notify Regional Board staff of any flooding, equipment failure, slope failure, or other change in site conditions, which could impair the integrity of waste containment facilities or precipitation and drainage control structures.
7. The Regional Board will review this Order periodically and will revise these requirements when necessary.
8. The Discharger may be required to submit technical reports as directed by the Executive Officer as provided for in California Water Code Section 13267.
9. The Discharger shall demonstrate financial responsibility for initiating and completing corrective action of all known or reasonably foreseeable releases, and shall submit a report of financial assurance by **April 30th of each year** for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Board as beneficiary and shall provide that funds for corrective action shall be available to the Regional Board upon issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
10. The Discharger shall demonstrate financial responsibility for closure and post-closure maintenance, and shall submit a report of financial responsibility by **April 30th of each year** for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Board as beneficiary and shall provide that funds for closure and post-closure maintenance shall be available to the Regional Board upon issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
11. This Order does not authorize violation of any federal, state, or local laws or regulations.

COMPLIANCE SCHEDULE

12. The Discharger, whose wastewater currently exceeds the numerical limitations established in Finding No. 26, shall complete the tasks described below by the due dates. To achieve compliance with this Order, the Discharger must demonstrate that:
- a. The wastewater discharged to the impoundments will be within the numerical limitations established in Finding No. 26 and in compliance with Title 27; or,
 - b. The discharge will be exempt from Title 27; or,
 - c. The wastewater will be disposed of in some manner in compliance with this Order.

Task Description	Due Dates
Conduct hydrogeologic investigation to determine the appropriate method for the long-term disposal of wastewater.	In progress
Submit hydrogeologic investigation Interim Report.	31 December 2004 Interim Report
Complete hydrogeologic investigation and submit final report that describes the long-term wastewater disposal plan consistent with current state regulations and policy.	30 September 2005 Final Report
Achieve compliance with the Order.	30 June 2006

I, THOMAS R. PINKOS, Executive Officer, do hereby certify that 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 4 June 2004.

 THOMAS R. PINKOS, Executive Officer

DLW:dlw/rac

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2004-0080
FOR
EXXONMOBIL PRODUCTION COMPANY
HILL LEASE, SOUTH BELRIDGE OIL FIELD
KERN COUNTY

Compliance with this Monitoring and Reporting Program is required pursuant to Water Code Section 13267.

A. REQUIRED MONITORING REPORTS

<u>Report</u>	<u>Due</u>
1. Proposed Sampling and Analysis Plan (Section C)	31 August 2004
2. Wastewater Monitoring (Section C.1)	Monthly
3. Facility Monitoring (Section C.2)	As necessary
4. Groundwater Monitoring (Section C.3)	Quarterly

B. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program. Reports that do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the Waste Discharge Requirements. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Data shall also be submitted in a digital database format acceptable to the Executive Officer. The data shall be summarized in such a manner so as to illustrate clearly the compliance with Waste Discharge Requirements or the lack thereof. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the tabular summaries.

The monitoring reports must be signed by a person identified below:

1. For a corporation: by a principal executive officer of at least the level of senior vice-president.
2. For a partnership or sole proprietorship: by a general partner or the proprietor.
3. A duly authorized representative of a person designated in a, b or c above if:
 - a. The authorization is made in writing by a person described in a or b of this provision;
 - b. 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 Unit, superintendent, or position of equivalent responsibility.

(A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

- c. the written authorization is submitted to the Regional Board.

The monitoring reports must include the following certification on the cover page:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

<u>Sampling Frequency</u>	<u>Reporting Frequency</u>	<u>Reporting Periods End</u>	<u>Report Date Due</u>
Monthly	Quarterly	Last Day of Month	by Quarterly Schedule
Quarterly	Quarterly	31 March	31 July
		30 June	31 July
		30 September	31 January
		31 December	31 January
Semiannually	Semiannually	30 June	31 July
		31 December	31 January
Annually	Annually	31 December	31 January

The results of any monitoring conducted more frequently than required at the locations specified herein or by the waste discharge requirements shall be reported to the Regional Board.

C. MONITORING

All monitoring shall be conducted in accordance with an approved sampling and analysis plan. A proposed Sampling and Analysis Plan for the facility shall be submitted by **31 August 2004**.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those that cannot be quantified and/or specifically identified. Samples for the constituents of concern shall be collected and analyzed in accordance with the methods listed in Table II.

The Discharger may use alternative analytical test methods, including new U.S. EPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program.

1. Wastewater

Sampling stations shall be established where representative grab samples of the wastewater discharge can be collected. As a minimum, wastewater samples shall be collected from (1) the influent to the initial impoundment; and (2) from the final impoundment. Samples should be representative of the volume and nature of the discharge. The following shall constitute the wastewater monitoring program:

<u>Constituent</u>	<u>Units</u>	<u>Sampling Frequency</u>
Total Flow	bbls or gal	Monthly
Field Parameters ¹		Quarterly
Monitoring Parameters ¹		Quarterly
Constituents of Concern ¹		Annually

¹ see Table II

2. Facility Monitoring

a. Freeboard Monitoring

Freeboard measuring devices shall be installed in each of the perimeter surface impoundments. Freeboard levels shall be observed and recorded monthly.

b. Facility Inspection

The Discharger shall inspect all containment facilities for damage semiannually. The Discharger shall report any damages observed to the Regional Board staff immediately. Any necessary work related to construction, maintenance, or repairs shall be implemented within 30 days of the inspection. Any subsequent repairs conducted by the Discharger shall be reported to the Regional Board staff within 30 days of completion of the repairs.

c. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage within 7 days following a storm yielding one inch or more of precipitation within 24 hours. Necessary repairs shall be completed within 30 days of the inspection. The Discharger shall report any damage and subsequent repairs within 30 days of completion of the repairs.

d. Earthquake Events

The Discharger shall perform a full-scale facility inspection within 7 days following an earthquake that could potentially damage waste management units and/or the facility. Necessary repairs shall be completed within 30 days of the inspection. The Discharger shall report any damage and subsequent repairs within 30 days of completion of the repairs.

3. Groundwater Monitoring

The Discharger shall operate and maintain groundwater monitoring systems in accordance with the Monitoring Plan described herein. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

Water level elevations shall be collected according to the monitoring schedule set forth in Table I. The Discharger shall determine groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program, and report the results annually, including the times of highest and lowest elevations of the water levels in the wells. Additionally, hydrographs of each well shall be prepared showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be submitted annually.

Groundwater samples shall be collected and analyzed according to the monitoring schedule set forth in Table I. All monitoring parameters shall be graphed so as to show historical trends at each well. The monitoring parameters shall also be evaluated with regards to the cation/anion balance, and the results shall be graphically presented using a Stiff diagram or a Piper graph. Stiff diagrams or Piper graphs shall be prepared for all groundwater monitoring wells every five years.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

4 June 2004

(Date)

DLW:dlw/rac:6/4/2004

TABLE I

MONITORING SCHEDULE

<u>Constituent</u>	<u>Evaluation Monitoring Wells</u>
Water Levels	Quarterly
Field Parameters	Semi Annually
Monitoring Parameters	Semi Annually
Constituents of Concern	Semi Annually

TABLE II

MONITORING PARAMETERS

Constituent	Units	US EPA Method
<u>Groundwater Elevation</u>		
Groundwater Elevation	Ft. & hundredths, M.S.L.	
<u>Field Parameters</u>		
Temperature	°C	
Specific Conductance	µmhos/cm	
PH	pH units	
<u>Monitoring Parameters</u>		
Total Dissolved Solids (TDS)	mg/L	160.1
Specific Conductance	µmhos/cm	120.1
Chloride	mg/L	300.0
Boron, dissolved	mg/L	6010B
<u>Constituents of Concern</u>		
<u>Standard Minerals</u>		
Alkalinity, dissolved	mg/L	310.1
Sulfate, dissolved	mg/L	300.0
Nitrate, dissolved	mg/L	300.0
Calcium, dissolved	mg/L	6010B
Magnesium, dissolved	mg/L	6010B
Sodium, dissolved	mg/L	6010B
Potassium, dissolved	mg/L	6010B
<u>Aromatic Hydrocarbons</u>		
Benzene	µg/L	8260B
Ethylbenzene	µg/L	8260B
Toluene	µg/L	8260B
Xylene	µg/L	8260B

INFORMATION SHEET

ORDER NO. R5-2004-0080
EXXONMOBIL PRODUCTION COMPANY
HILL LEASE, SOUTH BELBRIDGE OIL FIELD
KERN COUNTY

ExxonMobil Production Company, a subsidiary of ExxonMobil Corporation (hereafter Discharger), operates four surface impoundments that receive produced water and treatment backwash water from oil field operations at the Hill Lease in the South Belridge Oil Field. The impoundments are used for the storage and/or disposal of wastewater through evaporation and percolation. The impoundments are unlined and do not meet the prescriptive construction criteria for surface impoundments as specified in Title 27. The wastewater disposal operation is not currently regulated by WDRs.

The facility lies on Quaternary age lithologic units, which include the Alluvium, 22K sand, Corcoran Clay Equivalent, and the Tulare Formation. Alluvium contains sand, silty sand, silt, and clay. The 22K sand is a quartz-rich sand. The Tulare Formation is comprised of clay, silt, and sand. An unnamed intermittent stream channel is immediately to the north of the facility. The northern edge of the impoundments is within the 100 year floodplain of the intermittent steam channel. No faults of possible Holocene age traverse through the area. The nearest known Holocene fault is the San Andres Fault zone located 12 miles to the southwest.

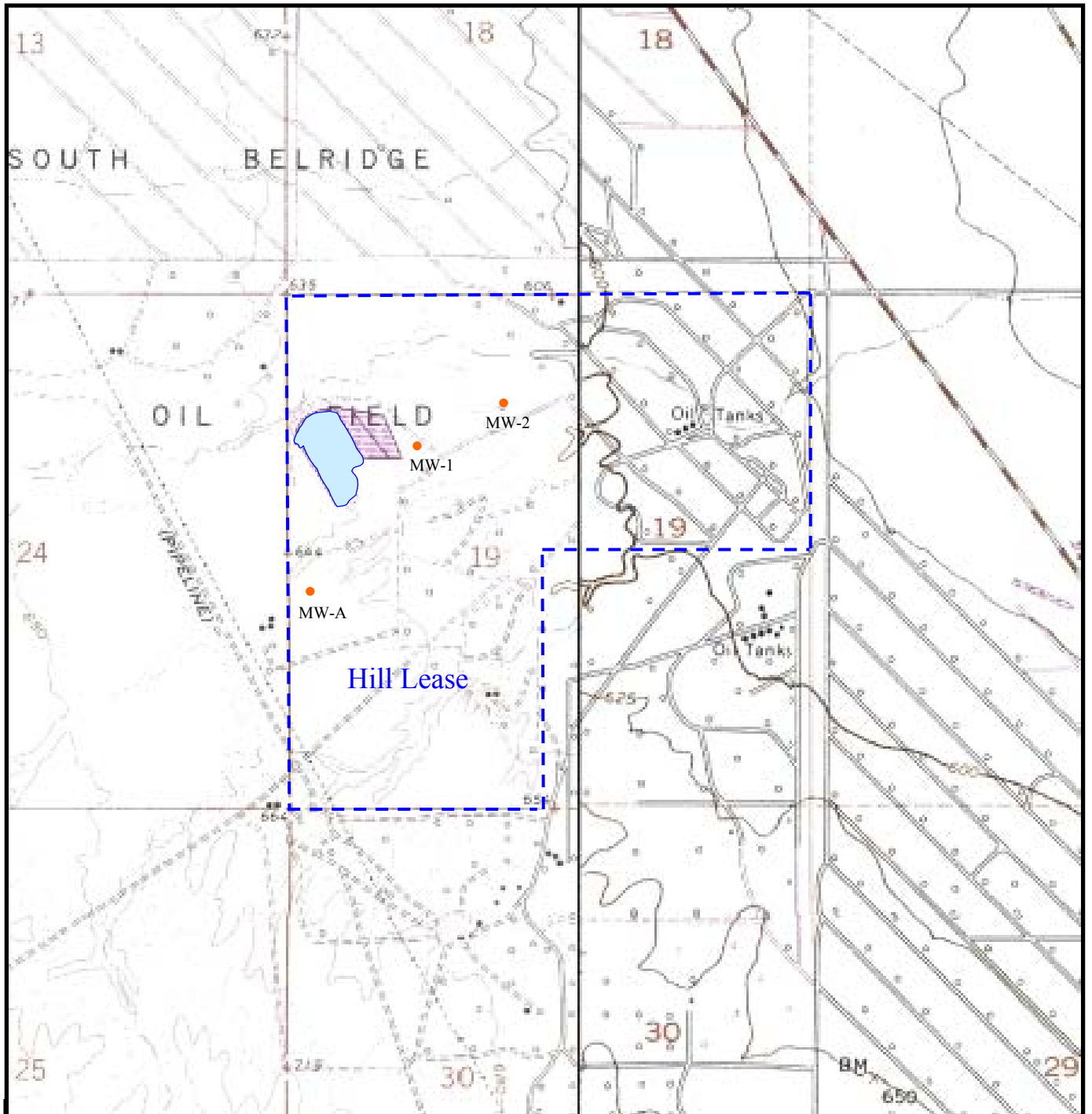
The Discharger has drilled two borings approximately 500 and 1,500 feet to the northeast and a third boring approximately 900 feet south-southwest of the impoundments. The first water-bearing zone was encountered in the Alluvium at a depth of approximately 175 to 180 feet. Three monitoring wells were installed with well screens placed across the water-bearing zone in the Alluvium. Wastewater in the Alluvium is free to migrate from beneath the impoundments in the downgradient direction to the east-northeast. The basal clay unit identified in the Alluvium may act as a barrier to restrict the vertical movement of water from the Alluvium into the underlying 22K sand and Tulare Formation.

The beneficial uses of groundwater beneath the area, as designated by the Basin Plan, are municipal supply, agricultural supply, and industrial service supply. The nearest known water supply is from two wells in Spicer City, approximately 8.5 miles to the east-northeast. There are no agricultural or domestic wells located near the facility.

Based on water quality analysis, wastewater with salinity concentrations that exceed maximum limits prescribed in the Basin Plan is being discharged to unlined impoundments and is subject to the requirements of Title 27 for discharges of waste to land. The Discharger is conducting a hydrogeologic investigation to determine the lateral and vertical extent of wastewater migration and if wastewater is degrading groundwater quality. The Order contains a compliance schedule to provide the Discharger sufficient time to complete the investigation and implement a wastewater disposal program consistent with state regulations and policy.

The action to adopt WDRs for an existing facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.) in accordance with Title 14, California Code of Regulations, Section 15301.

DLW:dlw/rac:6/4/2004



ATTACHMENT B

VICINITY MAP

Order Number R5-2004-0080

Waste Discharge Requirements For
ExxonMobil Production Company
Hill Lease, Kern County



Scale 1" = 1530'

N ½ & SW ¼ of Section 19, T28S, R21E, MDB&M
Belridge 7.5 Minute USGS Quadrangle