CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 83-18

WASTE DISCHARGE REQUIREMENTS FOR:

UNION OIL COMPANY
UNION CHEMICAL DIVISION
RODEO, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. Union Oil Company (hereinafter called the discharger) filed a Report of Waste Discharge dated March 11, 1983 for its plant located two miles southeast of Rodeo in Franklin Canyon (38° 01' 10" latitude and 122° 14' 20" longitude) as shown on Attachment A. This report included reports titled "Geotechnical Study Containment Ponds Union Chemicals Division Plant Rodeo, California" dated March 3, 1983 and "Plant Water Conservation System With Cogeneration Facilities".

2. The facility is used to calcine coke from petroleum refinery operations. The calcined coke is used by other companies and at other locations for aluminum and steel production. The following activities at this site could affect water quality and are the subject of these requirements:

   a. The uncalcined coke ("green coke") is stored in large piles on a 17 acre asphalted area. These piles are sprayed with wastewater from the ponds for dust control.

   b. Wastewaters from the boiler feedwater system, boiler blowdown, cooling tower blowdown and rainfall and excess spray runoff from the uncalcined coke storage area are contained in a two pond system.

3. The uncalcined coke storage areas described in Finding 2 drain to the pond system. The pond system consist of a 220,000 gallon concrete-lined settling pond (pond A) which overflows to a 3.4 million gallon pond presently being constructed (pond B). The coke which settles in pond A is periodically removed and fed to the calciners. The pond waters are used for: make-up water in the cooling tower; quench water for the calcined coke; and, spray water for the uncalcined coke piles.

4. The wastewater is expected to be relatively non-toxic and should not contain organic compounds in any significant concentration, but does contain some metals. However, petroleum refinery coke is a group 1 waste and its toxicity is dependent on the refinery's source of crude oil, operations and green coke handling. Wastewater could leach toxic material from the coke and, therefore; could also be a group 1 waste.

Due to the low level of contaminants the coke and wastewater are suitable for Class II-1 containment.

5. The green coke storage area and wastewater ponds must meet the criteria contained in the California Adminstrative Code, Title 23, Chapter 3, Subchapter 15 for classification as a Class II-1 Site suitable to receive the materials described in Finding 2 for materials storage and waste holding.

6. A geotechnical and soils investigaton report for the discharger's wastewater ponds indicates that the proposed ponds overlie fifteen feet of clay material with a permeability of less than $1X10^{-6}$ cm/sec. except in the northwest portion of Pond B where there are several feet of sand at or immediately below the pond's bottom elevation.

7. The information in Finding 6 indicates that the site does not meet criteria required in Finding 5. To provide the required level of protection, the discharger proposes that a pond perimeter dike of clay will be constructed with a ten-foot wide keyway cut at least three feet into the underlying impervious soil. The perimeter dike and underlying soil will then provide containment at least equivalent to that of a Class II-1 site.

8. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on July 21, 1982 and this Order implements the water quality objectives stated in that plan.

9. The beneficial uses of San Francisco Bay and Rodeo Creek are:

   a. Non-contact Water Recreation;
   b. Warm Freshwater Habitat;
   c. Wildlife Habitat;
   d. Preservation of Rare and Endangered Species;
   e. Marine Habitat;
   f. Fish Migration; and
   g. Fish Spawninig.

10. The existing and potential beneficial uses of groundwaters beneath and adjacent to this site are:

   a. Domestic water supply
   b. Agriculture water supply
   c. Industrial process supply; and
   d. Industrial service supply.

11. Contra Costa County Planning Department has indicated that they have approved use of the site for the intended purposes.

12. This project involves the continued operation of a privately owned facility with negligible or no expansion of use beyond that previously existing. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15101, Title 14, California Adminstrative Code.

13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge and has provided them with an opportunity for a public hearing, and an opportunity to submit their written views and recommendations.

14. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Union Oil Company shall comply with the following at its Franklin Canyon Plant:

A. Discharge Prohibitions

1. The treatment or handling of wastes shall not cause pollution or nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharge of any waste from the ponds or runoff from the coke piles to surface or ground waters of the State is prohibited.

3. The discharge of wastes or storage of materials at this site other than those wastes and materials described in Finding 2 is prohibited.

4. The storage of materials described in Finding 2 is prohibited outside of the areas described in Finding 3.

B. Specifications

1. The ponds shall be protected against erosion, washout and inundation which could occur as a result of floods having a predicted frequency of once in 100 years.

2. The exterior faces of dikes shall be protected from erosion and raveling to maintain the effectiveness of the barrier.

3. Vertical and lateral hydraulic continuity with ground and surface waters shall be prevented by the presence of a natural clay barrier of a least 5 feet in thickness and a permeability of $1X10^{-6}$ cm/sec or less, or its equivalent, on the bottom and sides of the ponds and under the green coke storage area. The discharger's proposal described in Finding 7 provides equivalent containment.

4. There shall be no seepage or overflow from the ponds.

5. A minimum of two feet of freeboard shall be maintained in each pond at the site.

C. Provisions

1. The discharger shall comply with all prohibitions and specifications of this order upon adoption.

2. A contingency plan acceptable to the Executive Officer shall be submitted, by December 1, 1983, indicating methods of containment and clean up of waste in the event of dike failure resulting from the maxium credible earthquake or other occurrences or excessive rainfall. The plan shall also address facility operations in the event of a labor dispute.

3. The discharger shall submit to the Board by December 1, 1983 a site closure plan. This plan shall address removal of all uncalcinate coke, contaminated pond waters and any residual contaminated soils from the site. This plan shall also include an estimate of the costs to implement the closure plan and assurances that such monies will be available. This plan shall be updated by January 31, annually.

4. The discharger shall maintain a copy of this order at the site so as to be available at all times to site operating personnel.

5. The discharger shall file with this Board an operation plan which shall be updated when substantial changes in operations are made and a letter indicating conformance with existing plans submitted annually. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal area(s).

6. This Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge and water applied to this property during subsequent use of the land for other purposes.

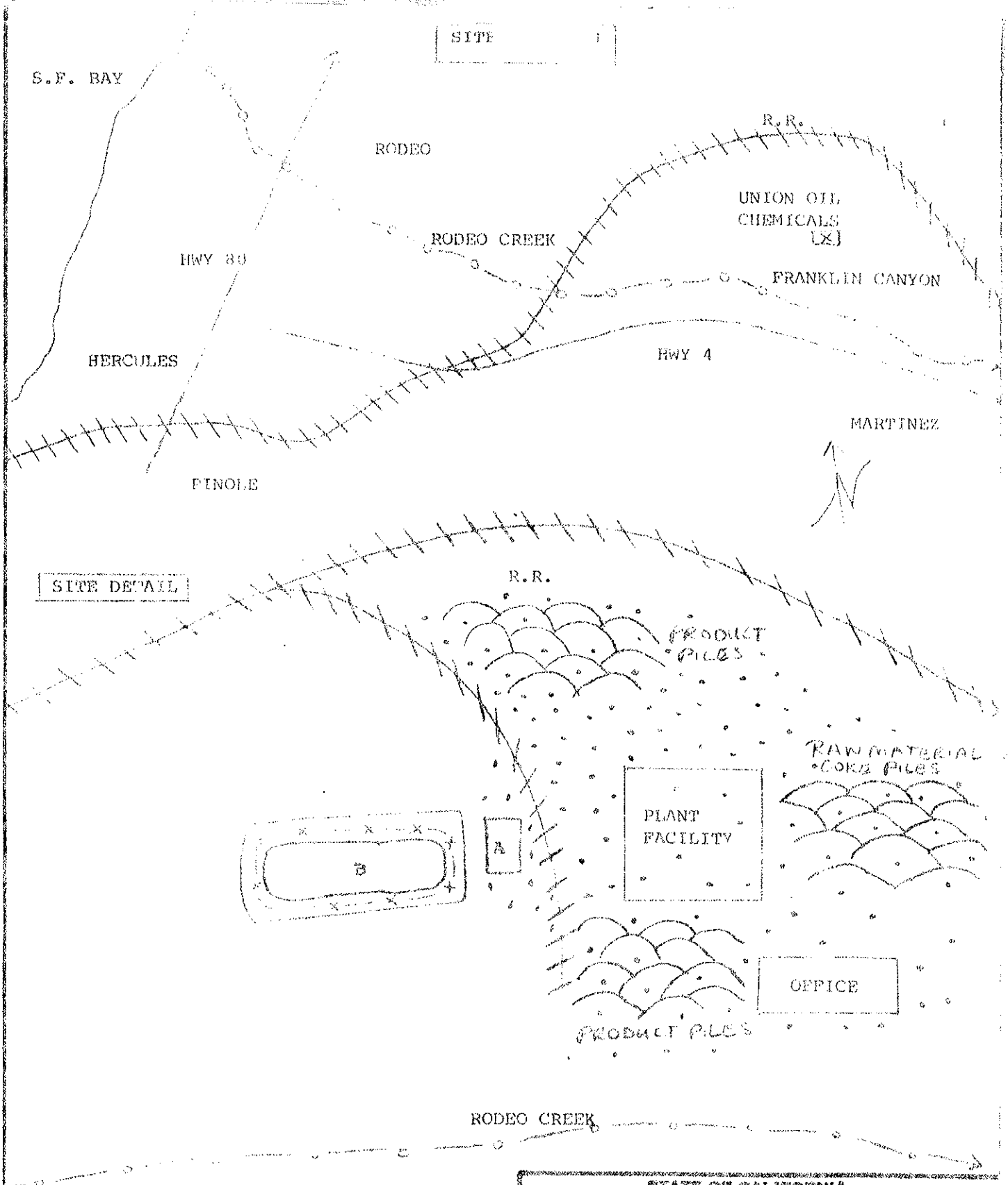
7. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program which may be directed by the Executive Officer.

8. This Order includes the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except items A.5, A.12, A.16, B.2, B.3, and B.5.

I, Fred H. Dierker, 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, San Francisco Bay Region on June 23, 1983.

FRED H. DIERKER
Executive Officer

Attachment: Diagram



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

UNION OIL CHEMICALS -- FRANKLIN CANYON
ATTACHMENT A

RAILROAD TRACK
CREEK
POND BERM
ASPHALT (NOT TO SCALE)

DRAWN BY: | DATE: 4-5-83 | DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

T E N T A T I V E

SELF-MONITORING PROGRAM
FOR

UNION OIL COMPANY

UNION CHEMICALS DIVISION

RODEO, CONTRA COSTA COUNTY

NPDES NO. CA _____

ORDER NO. _____

CONSISTS OF

PART A

AND

PART B

PART B

DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING ANALYSIS, AND OBSERVATIONS

A. Land Observation and Sampling Stations

Station	Description
A-1 thru A-'n'	Stations at 100 foot intervals around the perimeter of Pond A.
B-1 thru B-'n'	Stations at 100 foot intervals around the perimeter of Pond B.

B. Ground Water Monitoring Wells

The well locations are shown on the attached map and are generally described below.

Wells	Description
W1	Upgradient (north) of Ponds A and B
W2	Downgradient (south) of Pond A
W3	Downgradient (south) of Pond B

C. Observations

Stations	Frequency	Observation
A-1 thru A-'n'	Bi-weekly, October 1 to May 1; monthly, May 1 to October 1	Inspection to determine presence of leaching or seeps or any other indication of wastes
B-1 thru B-'n'	Bi-weekly, October 1 to May 1; monthly, May 1 to October 1	leaving the waste water ponds. Observations shall include any unusual growth or lack of freeboards
Ponds A and B	Bi-weekly, October 1 to May 1; monthly, May 1 to October 1	Observe available pond freeboards

If any pond is observed to have lessthan the minimum freeboard specified in these requirements, the Board shall be immediately notified by telephone. Notification shall include interim measures to maximize available freeboard. A written report shall be sent to the Board within 24 hours.

D. Sampling and Analyses

Station	Type of Sample and Frequency	Analyses
Pond A*	Quarterly grab sample	Arsenic, Hexavalent and Total Chromium, Cynanide, Lead, Mercury,Phenol, pH, Total Dissolved Solids, and Total Organic Carbon
Pond B*	Quarterly grab Sample	Hexavalent and Total Chromium, pH, Total Dissolved Solids, and Total Organic Carbon
Well W1, W2 & W3	Annual grab sample about September 1	Arsenic, Hexavalent and Total Chromium, Cynanide Lead, Mercury, Phenol, and pH
	Quarterly grab sample	Total Dissolved Solids, Total Organic Carbon, and pH
	Quarterly	Ground Water Elevation

*Reduction in frequency of required analyses will be considered in 1 to 2 years

E. Provisions

1. Part A shall be revised as follows:

   a. Delete Paragraphs: D., E.2., E.4., F.3.e., and F.3.g.

   b. Paragraph F.3.b: Delete last two sentences and insert, "The discharger will prepare the format to report compliance with the waste discharge requirements and the results of analyses required in this Self-Monitoring Program.

PART B

DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING ANALYSIS, AND OBSERVATIONS

A. Land Observation and Sampling Stations

Station	Description
A-1 thru A-'n'	Stations at 100 foot intervals around the perimeter of Pond A.
B-1 thru B-'n'	Stations at 100 foot intervals around the perimeter of Pond B.

B. Ground Water Monitoring Wells

The well locations are shown on the attached map and are generally described below.

Wells	Description
W1	Upgradient (north) of Ponds A and B
W2	Downgradient (south) of Pond A
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C. Observations

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D. Sampling and Analyses

Station	Type of Sample and Frequency	Analyses
Pond A*	Quarterly grab sample	Arsenic, Hexavalent and Total Chromium, Cynanide, Lead, Mercury, Phenol., pH, Total Dissolved Solids, and Total Organic Carbon
Pond B*	Quarterly grab Sample	Hexavalent and Total Chromium, pH, Total Dissolved Solids, and Total Organic Carbon
Well W1, W2 & W3	Annual grab sample about September 1	Arsenic, Hexavalent and Total Chromium, Cynanide Lead, Mercury, Phenol, and pH
	Quarterly grab sample	Total Dissolved Solids, Total Organic Carbon, and pH
	Quarterly	Ground Water Elevation

*Reduction in frequency of required analyses will be considered in 1 to 2 years

E. Provisions

1. Part A shall be revised as follows:

   a. Delete Paragraphs: D., E.2., E.4., F.3.e., and F.3.g.

   b. Paragraph F.3.b: Delete last two sentences and insert, "The discharger will prepare the format to report compliance with the waste discharge requirements and the results of analyses required in this Self-Monitoring Program.

c. Paragraph F.3.d: Delete last sentence.

d Paragraph F.4: Delete last sentence.

2. Records shall be kept and reported on the volume, type and source of all waste and petroleum coke received on site.

3. Annual reports shall contain graphs of pond and well water data.

4. The reports shall be filed regularly for each quarter of the year by the fifteenth of the following month: January 15, April 15, July 15, and October 15.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No.

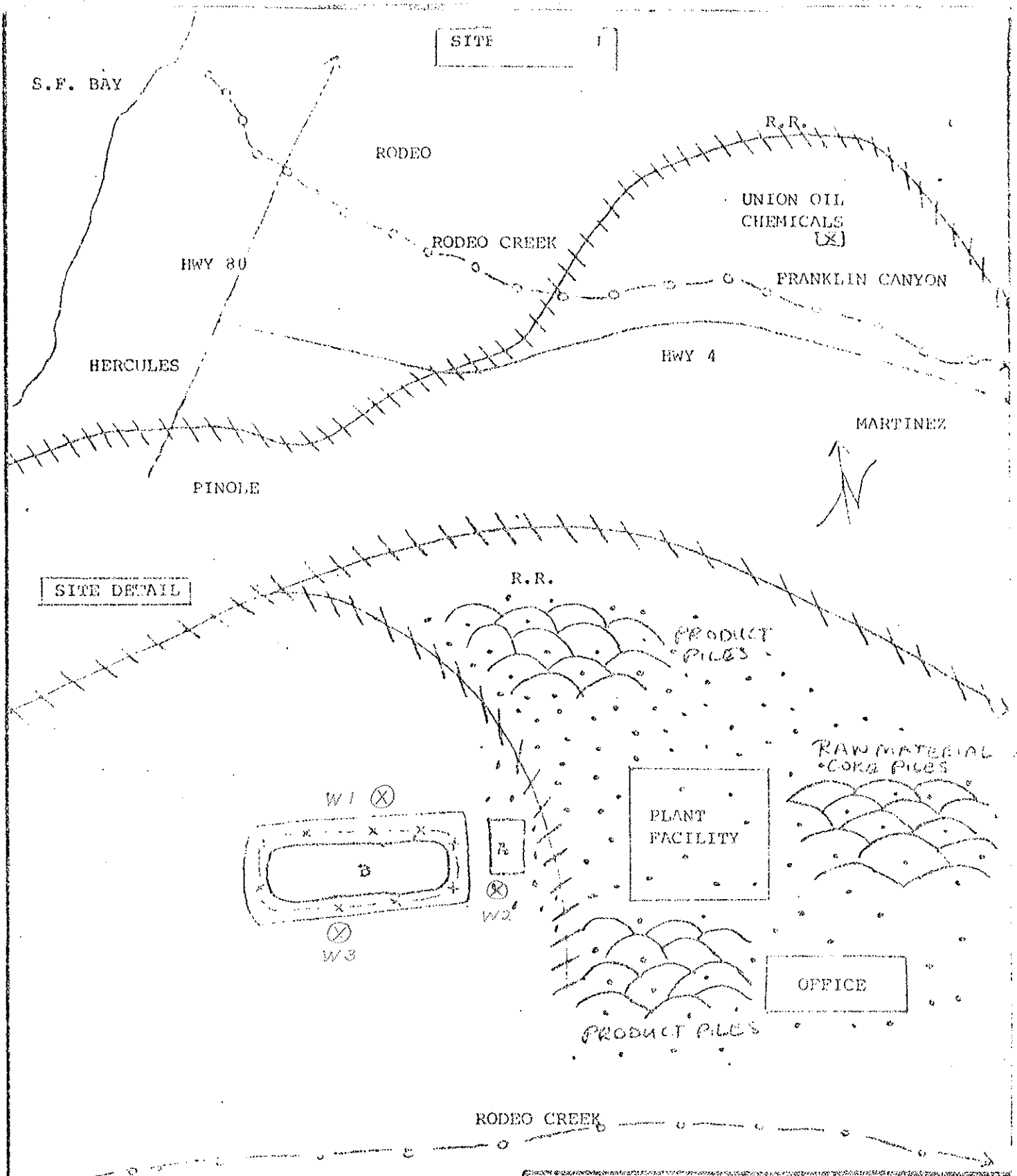
2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Effective Date_____

Attachment:
Attachment A



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UNION OIL CHEMICALS - FRANKLIN CANYON
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ASPHALT (NOT TO SCALE)

DRAWN BY: DATE: 4-5-85 REVISED: