

GW - 28

**GENERAL
CORRESPONDENCE**

YEAR(S):

1988

MINUTES

A meeting to discuss the Navajo Refining Company Discharge Plan was held at 9 o'clock a.m. on February 11, 1988, in the Oil Conservation Division Conference Room, State Land Office Building, Santa Fe, New Mexico. The following people attended the meeting:

Oil Conservation Division - William J. LeMay
David Boyer
Roger Anderson
Charles Roybal

Navajo Refining Company - D. O. Stevenson
Joel Carson - Losee & Carson
Matt Clifton
David Griffin

Holly Corporation - Henry Stern

David Boyer presided at the meeting. He explained that Navajo has been under requirements since 1980 to get an approved discharge plan and the latest time extension expired on January 15, 1988. He stated that the purpose of this meeting was to clarify what the remaining deficiencies in the proposed discharge plan are and what remaining commitments are required from Navajo. Mr. Griffin declared there is no problem with housekeeping and tankage items and a timeframe for these items will be submitted next week. Mr. Clifton requested that the focus of this meeting be on the contamination problem.

Mr. Carson discussed the covenant required by Mr. Boyer in which landowners will agree not to drill a domestic well south of the pond. He told of efforts to buy the land in Section 12 through a real estate agent. Mr. Carson agreed to provide ownership plats of the area involved in Sections 7 and 12. It was pointed out that a corner of the pond may lie on property not belonging to Navajo. Mr. Carson stated that attempts to buy the land will continue but if it cannot be bought, he will pursue the possibility of getting the State Engineer to intercede with some sort of regulation that will not allow for the approval of a domestic well in the subject area. He pointed out that there are no water rights in the area so no wells may be drilled for irrigation purposes. Mr. Roybal expressed doubt that the State Engineer would have the authority to make a regulation prohibiting the drilling of domestic wells. Mr. Carson stated that there is already one well on the subject 80-acre block of land but Mr. Anderson pointed out that if this well is not pulling out the allowable given in its permit, another well can be drilled. Mr. Carson asked for a period of two months in which to pursue the acquisition of the land and

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Held on February 11, 1988

if Navajo is successful, it will issue the required covenants. Mr. Boyer suggested that the ownership of Section 7 should also be looked into because there may eventually be problems in that area.

Mr. Griffin discussed plans for a new pond and the location of cut points in existing dikes which will basically make a plug flow situation. This would represent maximum pond capacity for the land owned by Navajo. Mr. Boyer agreed that this will be a good idea but some monitoring will be required. The primary interest of concern has been the location of wastewater entry to the pond and Mr. Griffin assured that maximum effort has been taken to extend the wastewater residence time. Mr. Anderson stated that freeboard should be in a three foot range and told of a recent opinion issued by the State Engineer's Office defining a "dam." He said that the State Engineer will have to approve the construction of large wastewater impoundments. Mr. Boyer agreed that this information on new ponds will be considered as part of Navajo's discharge plan submittal.

Mr. Boyer recommended granting a 90-day extension of time to Navajo with 30 and 60-day updates on the progress of land acquisition or covenants. He agreed to go to public notice on the ponds and work out the details with Navajo. If, at the end of 60 days, Navajo finds it cannot purchase the lands involved, another meeting will be held to discuss alternatives.

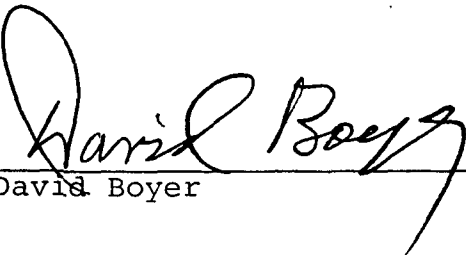
Mr. Clifton discussed the closure plan on the ditch and Pond 1. Mr. Boyer requested that a copy of everything submitted to EPA be sent to the Oil Conservation Division. If EPA does not require closure, then Navajo should so notify the Division within the same 90-day time period. Mr. Boyer said he would accept a commitment from Navajo that they will submit a detailed plan of closure within six months.

It was pointed out that any plant over 25 years old is required to test its underground wastewater piping capacity. Navajo has already replaced some wastewater piping and will identify the older piping and set up a schedule of shutdowns according to Mr. Griffin. Mr. Stevenson discussed several problems involved with the testing and expressed doubt that the testing can be accomplished. Mr. Anderson described hydrostatic tests which will test any pipe if a section of the pipe can be isolated. Mr. Boyer suggested that Navajo break out the systems by quality and test only the ones which have the nasty and acid water but not the ones with the good grade of wastewater.

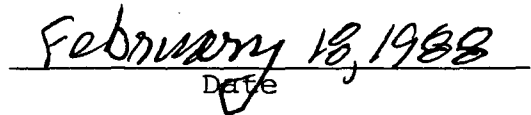
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Minutes of the Meeting
Held on February 11, 1988

He said that Navajo may have to think about replacing the pipe that cannot be tested. Mr. Griffin stated that Navajo does replace several sewers every year but has no prescribed schedule for the replacement.

The meeting was adjourned at 10:25 a.m.



David Boyer



Date

Copy sent to Navajo 2/19/88

NAVAJO REFINERY COMMITMENTS FOR DISCHARGE PLAN
(Agreed to at OCD/Navajo Meeting 2/11/88)

DATE	COMMITMENT
March 31, 1988	Revision of SPCC Plan to OCD. <i>OK</i>
March 31, 1988	Navajo to begin positive pressure testing on underground oil/product piping. Supply <i>OK</i> generalized testing description. Annual retest required with report to OCD annually summarizing test results and action taken.
March 31, 1988	Tank 135 seam repairs completed.
June 1, 1988	Report on study of oil and grease found in MW -6 to be provided. <i>?</i>
June 1, 1988	Tank 122 dismantled and removed.
July 1, 1988	RR Loading Tank (D-105 filter tank) removed <i>OK</i> and area policed.
July 31, 1988	Tank 133 seam repairs completed.
October 1, 1988	Fire pond water quality will be made equivalent to raw fresh water either by use for fire training or by drainage and refilling. <i>See attached</i>
October 1, 1988	Carbon black oil (CBO) area policed.
October 1, 1988	Removal of tracks at South Division rail loading area, completion of earthwork and guttering, and submittal of as-built plans.
December 31, 1988	Plans to OCD for catchment and drainage improvements at South Division for tanks (and associated transfer pumps) at tanks 130, 132, 133, 135. Specifications to have 1989 completion dates. (Ref: p. 2 Navajo letter of 1/11/88.)
December 31, 1988	Plans and specifications (as above) for modifications to North Division CBO and tank area (including tanks and pumps at tanks 18, 58-61, 837, 838), rail loading area, and salt filtering area near north API separator (including appropriate flood protection). Construction timetables to be included.

DATE	COMMITMENT
July 1, 1989	Submittal to OCD of <u>listing</u> and map of known plant sewer and drain lines carrying wastewater to treatment plant. Listing should include pipeline age, diameter and composition; and process sources to lines. OCD will require testing of wastewater lines for significant leaks, but will make decisions regarding test specifics after receiving sewer diagrams. <i>MS: mmt</i>
Prior to Construction -	Submit detailed plans and specifications for pond expansion. State Engineer review also necessary if pond berm greater than 10 feet above grade, or if pond retains greater than 10 acre-feet. <i>OK</i>
Before DP Approval-	Commitment to construction of downgradient well at or near property boundary to ensure shallow and deep contamination does not exceed standards. Location and construction details to be jointly determined by OCD and Navajo. If new property boundary is in the south one-half of Section 12, an additional well will be required at the south end of Section 12. <i>OK</i>
Before DP Approval-	Submit decision made by EPA on pond closure. If EPA to supervise, submit copy of plans and closure schedule sent to EPA. If OCD supervised, submit schedule for activity including dates plans will be provided to OCD, and proposed schedule for earthwork. OCD will require dewatering of pond #1; removal of ditch material to pond; covering to prevent runoff, runoff, and to minimize infiltration; and protection from 100-year flood.
Before DP Approval-	Submit asphalt storage pit information and drawing including depth, area/volume, anticipated frequency of use, and commitment to notify OCD when used. <i>OK</i>
Before DP Renewal -	Hydrotest wastewater pipeline from treatment plant to ponds.

NAME

D. O. STEVENSON

Joel Carson

Henry Stern

Matt Clift

David Griffin

Charles Raybal

William J. LeMay

ROGER ANDERSON

DAVID BOYER

ADDRESSNAVAJO REFINING CO. - ALTESIA
Loren & Carson P.A.

Holly Corp. - Dallas

NAVAJO

Navajo

Energy, Minerals + Natural Resources

" " OCD

" " OCD

" " "



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

March 8, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Zeke Sherman
Environmental Engineer
Navajo Refining Company
P.O. Drawer 159
Artesia, NM 88210

RE: Discharge Plan for Navajo Refinery, DP-28

Dear Mr. Sherman:

This letter is a follow-up to our discussion by telephone of March 3, 1988. During that conversation we discussed several issues including placement and construction of new monitoring wells. I request that Navajo Refinery use the following guidelines in locating and installing the new monitoring wells:

1. A well is being required by OCD to be located at the southern boundary of the proposed 80-acres to be acquired by Navajo. The east-west location is to be determined after submittal of water levels in several of the well points installed by Navajo in the spring of 1987. These points are not useful for water quality monitoring but are excellent for use as piezometers to determine flow direction from the ponds. If they can be located, stabilized and surveyed they can provide much meaningful data with little additional expense. The points necessary to establish water levels for a location for a new monitor well are:

P 87-1	P 87-14
P 87-2	P 87-15
P 87-3	P 87-16
P 87-4	P 87-17
P 87-13	p 87-19

Provide elevation and water levels for these points. In addition please provide water levels (and elevation and location data if not previously

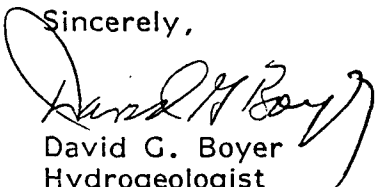
supplied and/or verified) for MW-3, 4, 5, 6, and 7. All water levels for well points and monitoring wells should be taken the same day if possible.

2. When all ponds and the adjacent monitoring wells have been completed, submit in final tabular form, X-Y coordinate locations and elevation coordinates for all monitor wells and well points used as piezometers; and maximum elevations (less freeboard) for water in the ponds. This information will be computerized by us to map water levels.
3. Attached is a typical monitor well of the design used in the earlier RCRA wells that you can use as a guide. Our only requirements are that you have a minimum of ten (10) feet of saturated thickness but that the maximum saturation does not exceed fifteen (15) feet, that the top of the screen not be submerged, that the filter pack top be placed about 12 inches above the top of the screens (to prevent bentonite migration) and that adequate surface casing and cement be placed to stabilize and seal the well. PVC may be used instead of stainless steel for the well itself.

On February 19, 1988 we sent Navajo a list of discharge plan commitments agreed to at the Navajo-OCD meeting of February 11, 1988. These were prepared from our notes and our understandings of the commitments made by Navajo. Please review these for any serious misinterpretations and notify us so that those points may be discussed further. Unless we hear from you by March 21, we will consider the comments binding.

If you have any questions, please contact me at 827-5812.

Sincerely,

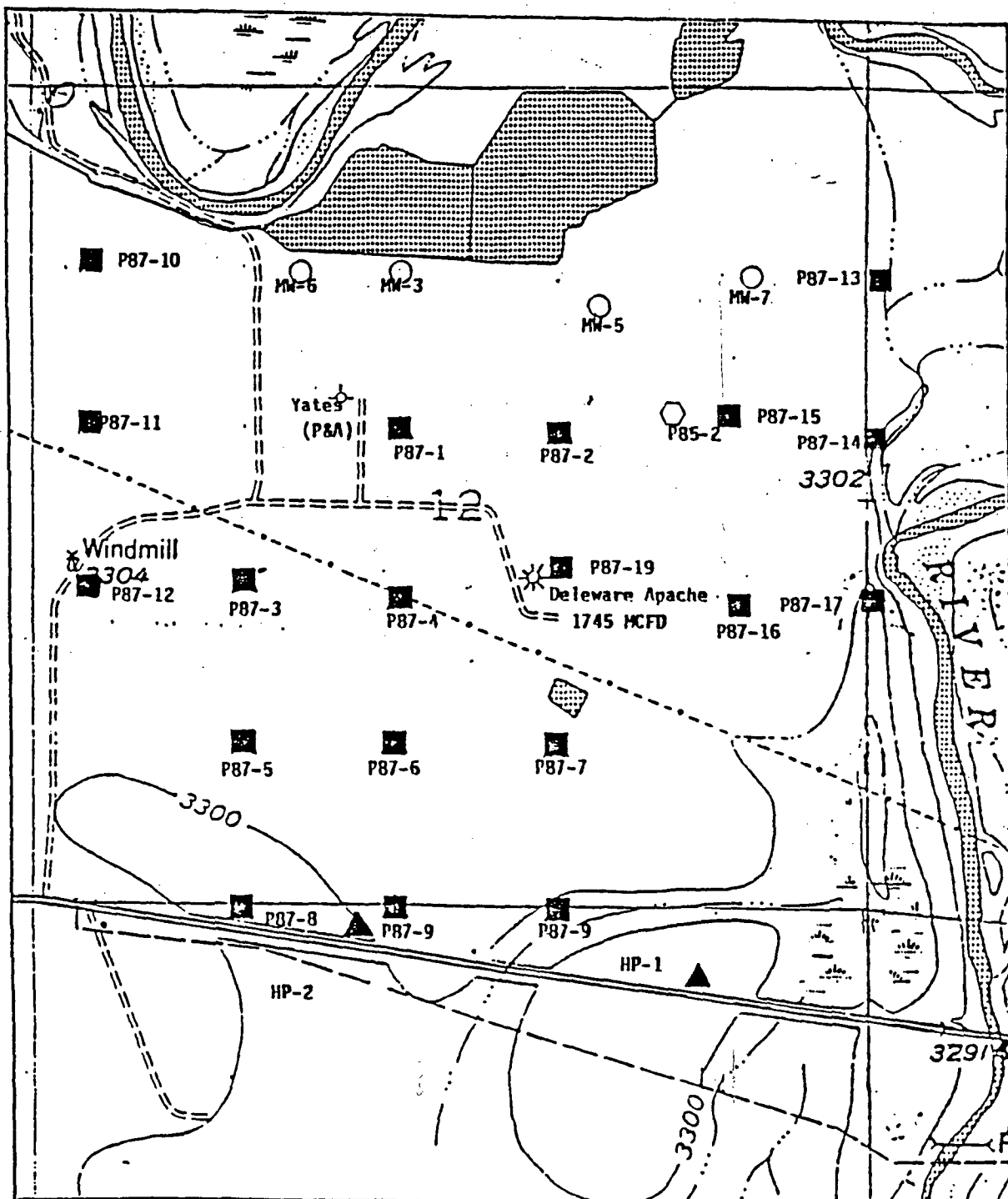


David G. Boyer
Hydrogeologist
Environmental Bureau Chief

DGB/ag

cc: OCD-Artesia

Attachments



LOCATIONS OF WELL POINTS

EVAPORATION POND AREA

- MW-6 Monitor Well
- P87-1 Point installed in this study (1987)
- ⬡ P85-2 Point installed in earlier study (1985)
- ▲ HP-2 Point installed by unknown agency

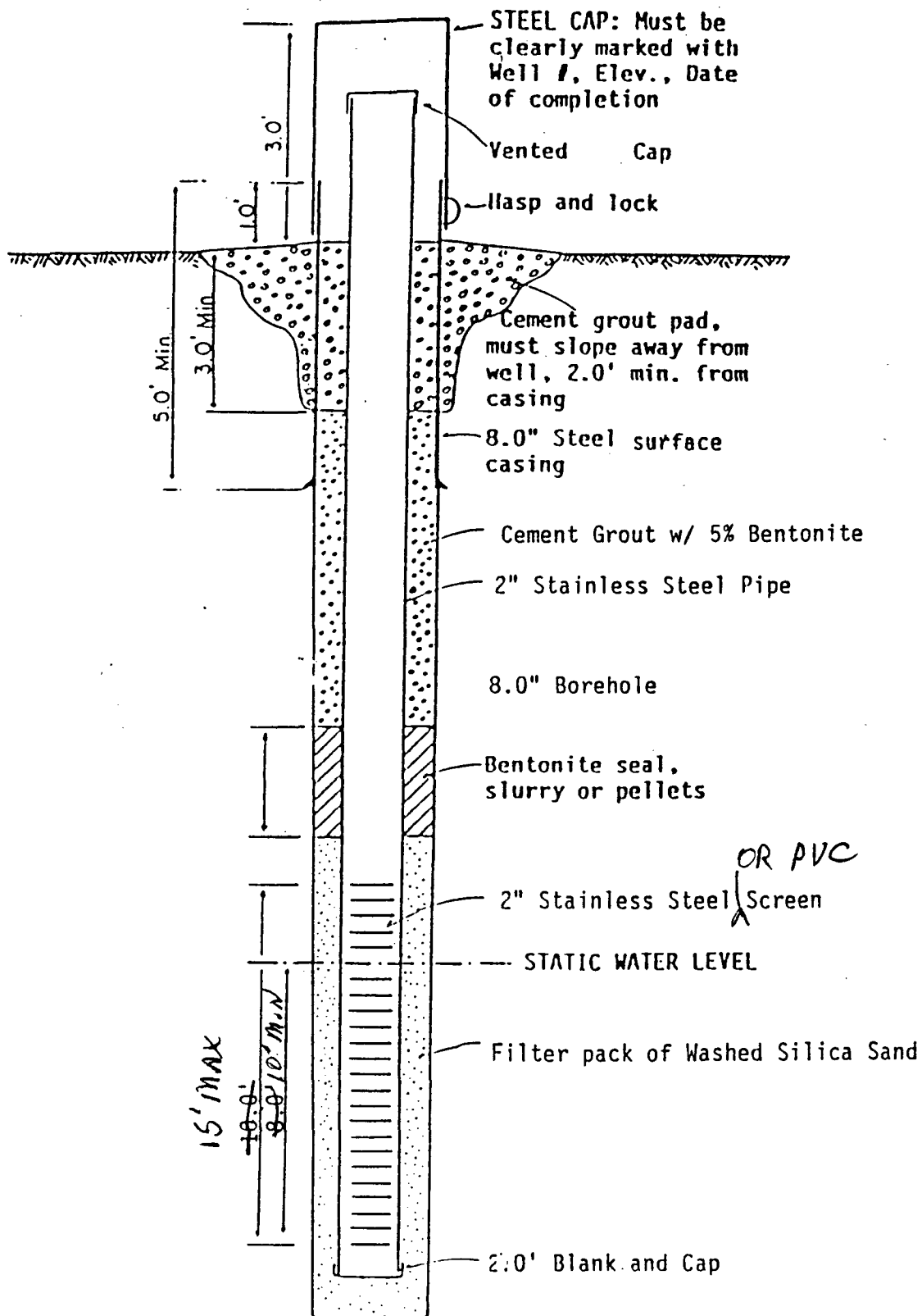


Figure 6-1
TYPICAL MONITOR WELL DESIGN



REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

EASYLINK
62905278

ARTESIA, NEW MEXICO 88210

March 17, 1988

Mr. David Boyer
Hydrogeologist
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Navajo Refinery Commitments For Discharge Plan

Dear Mr. Boyer:

Please find enclosed copies of plans and specifications for Navajo's evaporation ponds expansion project. We have provided Mr. Don Lopez of the State Engineer's Office the originals for his review.

Contact me at (505) 748-3311 if I can be of any further assistance.

Regards,

Zeke Sherman
Environmental Engineer

ZRS:ks

Enclosures

Memo to file on
Phone conversation with Zeke Sherman 3/21:
This letter is only correspondence regarding
2/11/88 Navajo Commitments for Discharge Plan.
Therefore, Commitments are
now binding.
D. Boyer
3/21/88



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

BATAAN MEMORIAL BUILDING
STATE CAPITOL
SANTA FE, NEW MEXICO 87503

May 3, 1988

Mr. W. C. Chamberlain, P.E.
Navajo Refining Company
P. O. Drawer 159
Artesia, New Mexico 88210

Dear Mr. Chamberlain:

The plans and specifications for Evaporation Ponds 6, 7 and 8 have been reviewed by members of my staff. Minor corrections must be made before they can be accepted for filing.

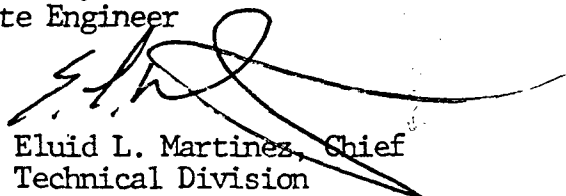
Returned herewith are the plans, specifications and State Engineer Project Checklists I and II. The items marked "no" on the checklists should be addressed. Footnote 7 on checklist II can be corrected by providing the source of information from which the maximum rainfall was obtained.

Please let me know if further discussion would be helpful.

Sincerely,

S. E. Reynolds
State Engineer

By

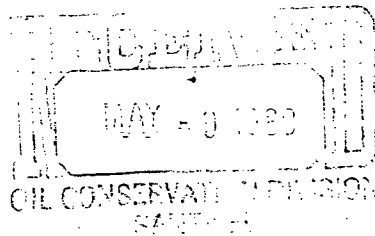

Eluid L. Martinez, Chief
Technical Division

ELM*hl

Copy: David Boyer

MEMORANDUM

May 3, 1988



State Engineer Office
Santa Fe, New Mexico

TO Donald T. Lopez, P.E., Chief, Design & Construction Section
FROM Paul Saavedra, P.E., Water Resource Engineer
SUBJECT Navajo Refining Company Evaporation Ponds 6, 7 and 8 Dam

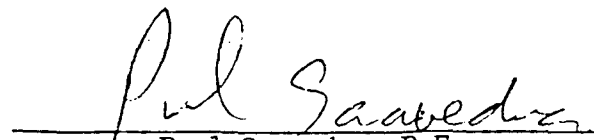
I have reviewed the plans for the Navajo Refining Company, Evaporating Ponds 6, 7 and 8 dam. The subject dam is a perimeter dam approximately 8 feet in height around ponds 6, 7 and 8. Interior dikes also 8 feet in height separate the three ponds.

Pond no. 6 will contain approximately 100 acre-feet, pond no. 7, 115 acre-feet and pond no. 8, 60 acre-feet, all at normal water level. The design allows for 3 feet of freeboard from the normal water level to the top of the dam. The dam has no spillway or outlet works. The only inflow is the pipeline from the refinery. The drainage area is the surface area of the ponds.

The 3 foot freeboard allows for 36 inches of rain which is much greater than a 100-year storm.

It should be noted that the entire area of the proposed dams appears to be within the 100-year flood plain of the Pecos River. Attached is a copy of the Flood Hazard Boundary Map dated February 7, 1978 (National Flood Insurance Program) for the area, the shaded area indicates the 100-year flood plain.

Attached are the State Engineer Office Engineering Review Checklists I and II. The items marked "no" on the checklists should be addressed before the project can be accepted for filing.


Paul Saavedra, P.E.

STATE ENGINEER OFFICE

ENGINEERING REVIEW PROJECT CHECK LIST

Revised January 9, 1984

I. General, Plans and Specifications

Applicant: Navajo Refigning Company, Evaporation Ponds 6, 7 & 8 File #

Requirement			Not appli- cable
	Yes	No	
1. Filing sheet (original drawings or mylar reproductions) Size, 36" x 24"	X		
2. Plans (original drawings or mylar reproductions) Size, 36" by 24"	X		
3. One-inch margin on all sides of drawings	X		
4. Sheets numbered in sequence	X		
5. Filing sheet separate from detail sheets	X		
6. Carefully and neatly prepared with waterproof India ink	X		
7. All signatures in waterproof black ink	X		
8. Rolled instead of folded	X		
9. Standard engineer's scale of sufficient size	X		
10. Distances and dimensions shown in feet and decimals thereof or metric equivalent	X		
11. Platted to true meridian	X		
12. Area location map included	X		
13. Map title and statements shown on the filing sheet	X		
14. Engineer's stamp or seal impressed on filing sheet	X		
15. Engineer's certificate of registration and preparation on filing sheet	X		
16. Claimant's certificate (special for corporations) on filing sheet	X		
17. Notary Public's signature and seal or stamp impressed on filing sheet in acknowledgement to claimant's certificate	X		
18. Certificate form for State Engineer's acceptance on filing sheet	X		
19. Specifications included	1/		
20. Engineer's certification of registration and preparation on specifications			1/
21. Engineer's stamp or seal impressed on specifications			1/
22. Certificate form for State Engineer's acceptance on specifications			1/
23. Statement in specifications recognizing the authority of the State Engineer regarding inspection during construction and full power to act if specifications are not met		X	
24. Cost estimate	X		
25. Filing fees	X		

Note: Stock-water reservoirs in excess of 10 acre-feet shall comply with State Engineer Order Number 68 dated March 10, 1957.

1/ Specifications not submitted separately but provided on the plans.

Date April 29, 1988

Signature Paul Sawedha

STATE ENGINEER OFFICE
ENGINEERING REVIEW
PROJECT CHECK LIST
Revised January 9, 1984

FI. Dam and Appurtenances

Applicant: Navajo Refining Company Evaporation Ponds 6, 7 & 8

File #

Requirement	Yes	No	Not applicable
1. Map of drainage area	7/		
2. Hazard classification (criteria in SCS TR-60 acceptable).....	x		
3. Average annual yield of drainage area in acre-feet 1/.....		7/	
4. Topography of proposed reservoir 2/	x		
5. Area-capacity table or curve for the reservoir to the dam crest		8/	
6. Detailed dam site topography	x		
7. Dam site profile along centerline showing foundation materials geology and construction features	9/		
8. Maximum dam section and dam section along outlet works			x
9. Upstream slope not steeper than 2-3/4 to 1 (below spillway) 3/		10/	
10. Downstream slope not steeper than 2 to 1 3/	x		
11. Minimum crest width = $2(h)^{2/3} + 3'$ (minimum 8') 3/	x		
12. Freeboard above maximum high water elevation, minimum 5 feet 4/		7/	
13. Riprap and bedding gravel on face of dam 5/			x
14. Analyses of construction materials submitted	9/		
15. Foundation investigation 6/	9/		
16. Cutoff trench provided	x		
17. Outlet works design (complete with hydraulic properties); minimum 18" pipe			x
18. Flood detention dams shall be ungated and the principal spillway (or outlet) of flood detention dams should be designed to empty the flood pool within 96 hours and to empty the sediment pool at the maximum practicable rate			x
19. Make and type of gates			x
20. Detailed spillway topography			x
21. Spillway design hydrograph (criteria set forth in SCS TR-60)			
22. Freeboard design hydrograph (are acceptable for items 21 & 22)		7/	
23. Spillway design hydraulics and capacity			x
24. Normal and maximum water surface elevation	x		
25. Outlet works tied to public survey corner or state coordinates		x	
26. Permanent bench mark established above high water line and tied to a public survey corner or state coordinates		x	

1/ Required for other than flood detention dams

2/ Contour interval shall be such as to provide the basis for an accurate area-capacity curve or table

3/ Where earthen dams are to be constructed having other than a low hazard classification, an analysis shall be prepared covering slope and foundation stability under steady seepage conditions and where applicable an appropriate seismic loading; design of the dam shall be based on these studies

4/ Not required for dams designed in accordance with item 22

5/ May be omitted on flood detention dams designed to be emptied in 96 hours or less

6/ Including logs and locations of core or auger holes; material characteristics including strength parameters; settlement or consolidation; and permeability

7/ Drainage area is surface area of the ponds, natural inflow would be rain on the surface are.

8/ Area capacity curve stops at normal water elevation.

9/ One test hole was drilled.

10/ Dike section has water on both sides and each side has a slope of 2H to 1V.

Date April 29, 1988

Signature

Paul Sacwedon

MEMORANDUM

July 27, 1988

State Engineer Office
Santa Fe, New Mexico

TO Donald T. Lopez, P.E., Chief, Design & Construction Section

FROM Paul Saavedra, Water Resource Engineer

SUBJECT Review of Plans and Specifications for Navajo Refining Company
Evaporation Ponds 6, 7 and 8 - File No. 4295

The writer has reviewed the subject plans and specifications. The ponds are designed to evaporate refinery effluent from the Navajo Refinery at Artesia, New Mexico. The subject dam is a perimeter dam approximately 8 feet in height around three ponds, ponds 6, 7 and 8. Interior dikes also 8 feet in height separate the 3 ponds. The hazard classification is low with a total combined storage capacity of 275 acre-feet at the normal water elevation.

There is no natural inflow to the ponds. The drainage area is the surface area (51 acres at the normal water line) of the ponds which is fed by a pipeline from the refinery. The 3 foot freeboard from the maximum water level to the top of the dam appears to be much greater than the 100-year storm. The dam has no spillway or outlet works.

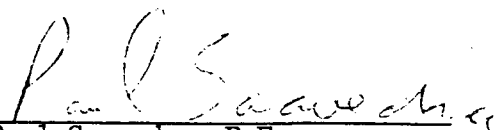
It should be noted that the entire area of the proposed dams appear to be within the 100-year floodplain of the Pecos River. On July 25, 1988, Mr. Lopez spoke to Mr. David Boyer of the N.M. Oil Conservation Division (OCD). He stated that OCD administers the water quality regulations for the Navajo Refinery and that OCD is reviewing the adequacy of the construction of the ponds. He stated that OCD would require the exterior pond embankments be capable of withstanding a 100 yr. flood in the Pecos River. Attached is a copy of the Flood Hazard Boundary Map dated February 7, 1978 (National Flood

Insurance Program) for the area, the shaded area indicates the 100-year floodplain. It should be noted that inundation of the evaporation ponds by a flood in the Pecos River could result in discharge of the pond liquid into the Pecos River.

It is recommended the Navajo Refining Company's Evaporation Ponds 6, 7 and 8 be accepted for filing subject to the following conditions:

1. The qualifications of a professional engineer registered in New Mexico who will supervise construction must be approved by the State Engineer prior to undertaking construction.
2. The professional engineer supervising construction shall submit a progress report to the State Engineer by the 10th day of each month.
3. Construction shall be in accordance with approved plans and specifications. Any modification of the approved plans and specifications or design changes must be approved in writing by the State Engineer prior to undertaking such modifications.
4. Upon completion of the construction, the professional engineer shall submit to the State Engineer:
 1. A completion report which shall include a description of problems encountered and their solution, summary of materials test data and construction photographs;
 2. As-built drawings; and
 3. A certificate that the dam as constructed is safe for its intended use.

5. This approval, is of course, subject to all other applicable laws and regulations.


Paul Saavedra, P.E.

PS:kb

cc: D.N. Stone
David Boyer, OCD



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

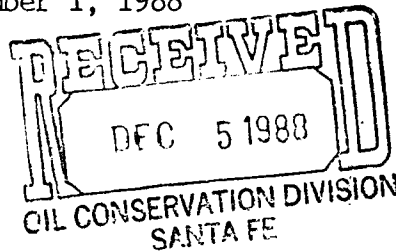
SANTA FE

December 1, 1988

S. E. REYNOLDS
STATE ENGINEER

BATAAN MEMORIAL BUILDING
STATE CAPITOL
SANTA FE, NEW MEXICO 87503

Mr. Neal R. Lewis
Engineering Construction Supt.
Navajo Refining Company
P.O. Drawer 159
Artesia, New Mexico 88210



Dear Mr. Lewis:

Reference is made to your November 16, 1988, letter recommending Mr. Bill G. McFarland, P.E., as the engineer in charge of construction of the Navajo Refining Company Evaporation Ponds 6, 7 and 8. We have reviewed Mr. McFarland's qualifications and find them acceptable subject to the following conditions:

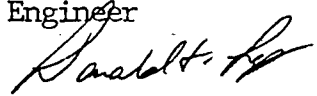
1. Mr. McFarland shall submit a progress report to the State Engineer by the 10th day of each month.
2. Construction shall be in accordance with approved plans and specifications. Any modification of the approved plans and specifications or design changes must be approved in writing by the State Engineer prior to undertaking such modifications.
3. Upon completion of the construction, Mr. McFarland shall submit to the State Engineer:
 - a. A completion report which shall include a description of problems encountered and their solution, summary of materials test data and construction photographs;
 - b. As-built drawings; and
 - c. A certificate that the dam as construction is safe for its intended use.

Please let me know if further discussion would be helpful.

Sincerely,

S. E. Reynolds
State Engineer

By:


Eluid L. Martinez, Chief
Technical Division

ELM:kb

cc: D.N. Stone, Water Rights Division
David Boyer, Energy & Minerals Dept.



REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

ARTESIA, NEW MEXICO 88210

December 23, 1988

Mr. David G. Boyer, Hydrogeologist
Oil Conservation Division
P.O. Box 2088
Land Office Building
Santa Fe, New Mexico 87501

Re: Navajo Refining Discharge Plan, GW-28

Dear Mr. Boyer:

As we approach the end of 1988 we thought it would be appropriate to briefly recap the completion during this year of various commitments made to your division at our February 1988 meeting on our discharge permit and to also describe our current situation on slop oil tankage (tank 130, 132, 133 and 135) and how such effects our commitments in this area.

1. During 1988 our SPCC plan was revised, updated and submitted to your office. Currently, we are completing a project whereby deficient dikes were increased and drain pipes added.
2. An inventory of active liquid hydrocarbon underground lines was submitted, as well as, procedures and testing schedule for such lines.
3. Tank 122 was dismantled and removed and apparent seam leaks on tanks 133 and 135 were inspected and, where needed, were repaired.
4. The railroad loading tank, D-105 filter tank, was removed and the area policed.
5. The boiler blowdown was diverted from the South Plant firewater pond and fresh water make up continues to improve the water quality. Testing of the water quality will again be performed in January 1989 and if such has not reached our desired goal, the water will be drained to our firefighting facility and made up with fresh water.
6. Railroad tracks have been removed from the South Plant, graded to improve drainage and as built plans submitted to your office.
7. Requested data on our asphalt storage pit were submitted.
8. We have submitted plans and recently received approval from the State Engineer's office for our evaporation pond expansion. Bids for this project will be sent to contractors in early January 1989. Work will proceed expeditiously, subject to weather conditions.

Navajo has strived to improve its maintenance efforts in detecting and repairing oil drips and leaks at tanks, pumps or any discharge points and generally improving any deficiencies detected.

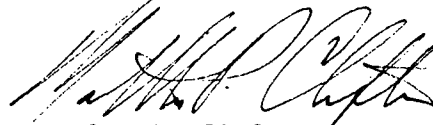
Recently we have obtained Board of Directors approval for additional slop oil tankage and as a result we are currently evaluating how the addition of such tankage could effect the future use of Tanks 130, 132, 133 and 135. Because of this, we felt it prudent to not submit definitive plans for catchment and drainage improvements for these tanks. We are hereby requesting that such plans not be required until June 30, 1989 in order to properly evaluate our options in this area. Particular maintenance attention will be given to these tanks during this interim period.

Plans and specification for our CBO loading rack and salt filter vessel containment project will be submitted by January 31, 1989.

We, at Navajo, are proud of our accomplishments during the last twelve months in improving our facility and we are dedicated to continue these efforts in the forthcoming years.

We hope you and all you personnel have a happy holiday season and, as always, your cooperation is deeply appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Matthew P. Clifton', is written over a horizontal line.

Matthew P. Clifton
Mgr. of Economics & Engineering

MPC/sgp

TELEPHONE
(505) 748-3311



REFINING COMPANY

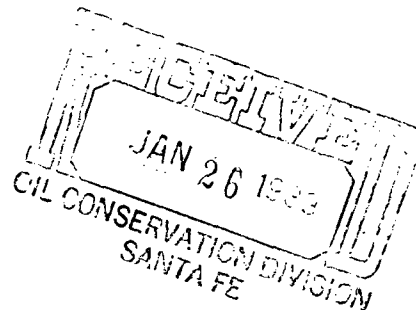
501 EAST MAIN STREET • P. O. DRAWER 159

ARTESIA, NEW MEXICO 88210

January 24, 1988

1989 *QRB*

Mr. David G. Boyer
NM Oil Conservation Division
Land Office Building
P.O. Box 2088
Santa Fe, NM 87501



RE: NAVAJO CORRESPONDENCE, DECEMBER 23, 1988
NAVAJO REFINERY DISCHARGE PLAN, GW-28

Dear Mr. Boyer:

I have enclosed copies of plans and specifications for spill containment at our CBO truck loading rack, and the salt filters at the North Plant API separator for your consideration. We expect construction to commence on both projects during the month of June 1989, with completion by the end of July 1989, or possibly sooner.

On January 19, 1989 we commenced construction of the additional evaporation pond and reinforcement of the existing dikes to protect against flood stage. Construction should take approximately three to four weeks.

Should you have any questions, do not hesitate to contact me at (505) 748-3311, extension 281.

Regards,

Zeke Sherman
Environmental Engineer

ZRS/pb
enclosure

August 10, 1989

COMPLETION REPORT

NAVAJO EFFLUENT EVAPORATION PONDS

Pond No. 6 has been completed. The dike has been built to the elevation of 3,314 feet and has been given final grading and shaping on the sides and the top. The top is approximately twelve (12) feet wide, allowing for vehicular traffic. There are access ramps to the top at the northwest, southeast and at the point where the new dike joins the old dike. The dike slopes are approximately 3:1 all around. The height of the dike from the pond bottom varies from five (5) feet on the west end to eleven (11) feet on the east end. The project has proceeded reasonably well and has been built substantially according to the plans.

The only problems were encountered at the beginning of the project and were reported in the May 10th report. Soils on site had at least 70%, passing the No. 200 screen indicating soils with high volume change. Reducing the specified density from 95% to 90% was necessary due to these soils. This change allowed the Contractor to meet density requirements in all areas of the keyway and dike except the East dike where the compaction equipment used caused pumping from the high ground water table in the corner. On the keyway of the East dike densities of 86% to 87% were achieved.

After discussions between the Soils Engineer and myself, the Field Engineer, we decided to begin backfilling the keyway after letting it set for two days in hopes of allowing the groundwater to stabilize. We felt that further work on the keyway would only aggravate the situation. We also felt the keyway as cut and compacted would meet the intent of the design and prevent any sliding of the dike. This solution allowed project to proceed and no further problems were encountered.

Bill McFarland, P.E.
Project Monitor



File Copy (6)

OIL CONSERVATION DIVISION
RECEIVED

'89 DEC 11 PM 3 48

REMEDIAL INVESTIGATION WORK PLAN
FOR
NAVAJO REFINING COMPANY
FACILITY IN ARTESIA, NEW MEXICO

EPA ID No. NMD 048918817

Prepared for:

NAVAJO REFINING COMPANY
Artesia, New Mexico

Prepared by:

The Earth Technology Corporation
520 Post Oak Boulevard, Suite 750
Houston, Texas 77027

TETC Project 90-757

November 1989

Wells drilled for OCD are shown as OCD-1 through OCD-8
 Wells drilled for GEOSCIENCE are shown as MW-2 through MW-7,
 P-1 through P-3 and Well Point #1
 (Remainder are from an earlier attempt at monitoring)

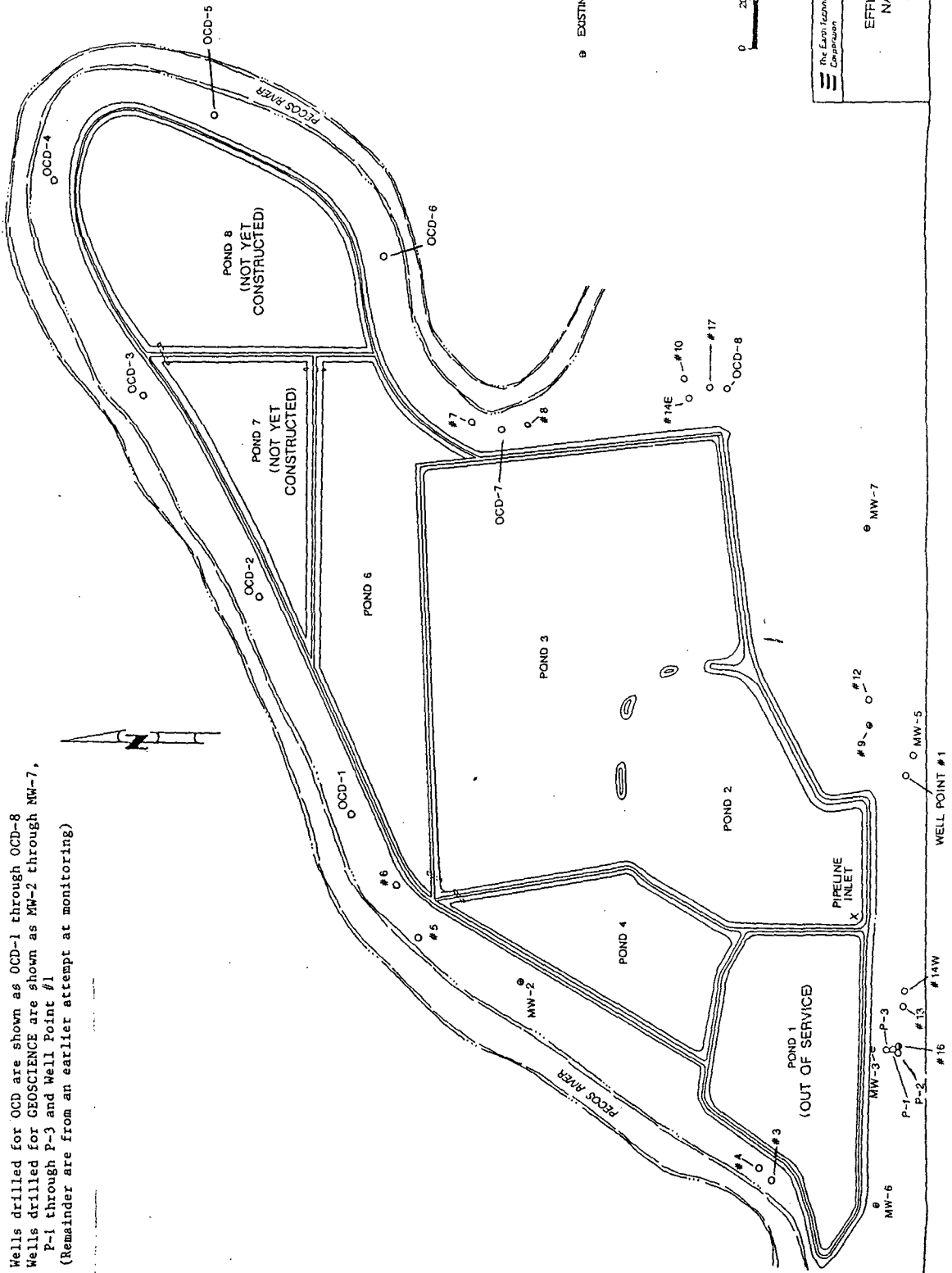


FIGURE 3-2

EFFLUENT EVAPORATION PONDS
 NAVAJO REFINING COMPANY
 ARTESIA, NEW MEXICO

TELEPHONE
(505) 748-3311



REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

ARTESIA, NEW MEXICO 88210

EASYLINK
62905278
FAX
(505) 746-6410

OIL CONSERVATION DIVISION
RECEIVED

90 FEB 9 AM 8 35

February 7, 1990

Mr. David G. Boyer, Director
Environmental Bureau
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501

RE: New Evaporation Pond #6

Dear Mr. ^{Dave} Boyer:

This letter is to notify you that Navajo Refining Company placed Evaporation Pond #6 into service on February 1, 1990. There are no apparent problems at all with this new pond. The flooding of Pond #6 lowered the other ponds approximately a foot, giving a freeboard level of 4 to 5 feet on all perimeter dikes. Navajo is still awaiting written confirmation from the EPA in Dallas to start stabilization work on Pond #1.

Navajo has begun an investigation of additional diesel fuel under the refinery. A geologist with John W. Shomaker, Inc., Bob Newcomer, and a drilling rig from Southwest Engineering are presently in the refinery working to define the situation. You will receive a report as soon as their investigation is complete.

Sincerely yours,

David G. Griffin
Supt. Environmental
Affairs & Quality Control

DGG/pb

TELEPHONE
(505) 748-3311



REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

EASYLINK
62905278

FAX
(505) 746-6410

'90 MAY 14 AM 8 55

ARTESIA, NEW MEXICO 88210

May 10, 1990

Mr. David G. Boyer, Chief
Environmental Bureau
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501

RE: Land Acquisition - Navajo Evaporation Ponds

Dear Dave:

Navajo has finally resolved the ownership issue at the evaporation ponds. The dike along the Northwest edge of pond #4 has been relocated to clear the fraction of an acre corner not owned by Navajo. The small strip of new pond #6 that inadvertently encroached on Marbob property has been purchased. A copy of the deed is enclosed.

In addition, Navajo is attempting to acquire additional property in the area Northeast of pond #6, so that there will be no problems if ponds #7 and 8 are ever required to be built.

If you have any questions, please call.

Sincerely,

David G. Griffin
Supt. of Environmental
Affairs & Quality Control

DGG/pb
enclosure

QUITCLAIM DEED

MARBOB ENERGY CORPORATION, a New Mexico corporation, for consideration paid, quitclaims to NAVAJO REFINING COMPANY, a Delaware corporation, P. O. Drawer 159, Artesia, New Mexico, 88210, the surface only of the following described real estate in Eddy County, New Mexico:

Township 17 South, Range 27 East, N.M.P.M.

Section 6: NW/4 SW/4 SW/4

WITNESS our hands and seals this April 30, 1990.

ATTEST:

MARBOB ENERGY CORPORATION

Ray Miller
Secretary

By: John R. Gray
President

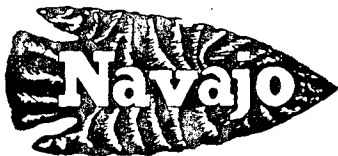
STATE OF NEW MEXICO)
 : ss.
COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this 30 day of April, 1990, by John R. Gray,
____ President of MARBOB ENERGY CORPORATION, a New Mexico corporation, on behalf of said corporation.

My commission expires:
11/28/91

Dolma Rich
Notary Public

TELEPHONE
(505) 748-3311



REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

ARTESIA, NEW MEXICO 88210

July 12, 1990

EASYLINK
62905278

FAX
(505) 746-6410

Mr. David Boyer
New Mexico Oil Conservation Division
Land Office Building
P. O. Box 2088
Santa Fe, NM 87501

Re: Discharge Plan, GW-28

Dear Mr. Boyer:

I have enclosed copies of drawings for catchments and drainage construction at Tanks 130, 132, 133, and 135, as requested. I have also enclosed copies of the as-built drawing and completion report for the installation of Evaporation Pond No. 6. This should satisfy the remaining information requests from your May 22, 1990 letter.

If I can be of any further assistance, please do not hesitate to contact me.

Regards,

Zeke Sherman
Environmental Engineer

ZRS:tjc
Encls.



BRUCE KING
GOVERNOR

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

October 21, 1991

CERTIFIED MAIL
RETURN RECEIPT NO. P-327 278 281

Mr. David G. Griffin
Superintendent of Environmental Affairs and Quality Control
Navajo Refining Company
P.O. Drawer 159
Artesia, New Mexico 88210

RE: DISCHARGE PLAN GW-28
NAVAJO REFINERY
EDDY, COUNTY, NEW MEXICO

Dear Mr. Griffin:

The ground water discharge plan, GW-28, for the Navajo Refinery located in the SE/4 Section 1, E/2 Section 8, w/2 Section 9, N/2 Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico is hereby approved with the following conditions and reasons (as required by the New Mexico Water Quality Act, Section 74-6-5K.):

1. Navajo Refining Company shall complete all commitments by previously agreed upon dates unless written permission for alternate dates is subsequently approved by the Oil Conservation Division (OCD).

Reason: The refinery is a complex facility with many interdependent operations. Unplanned events can occur that can cause unintentional delays in meeting previously agreed upon commitments. However, it is incumbent upon Navajo Refining Company to report such delays, provide adequate explanation, and propose reasonable alternate dates of compliance.

2. Navajo Refining Company shall provide copies of all 1991 and subsequent reports and correspondence between the USEPA (and NMED if applicable) regarding Solid Waste Management Units (SWMU's) at the refinery.

Reason: EPA is requiring an extensive investigation of solid waste management units, including the Truck Bypass landfarm and the existing evaporation ponds, to define the

Mr. David G. Griffin

October 21, 1991

Page 2

nature, extent, magnitude, and rate of migration from solid waste units. If information or reports generated as a result of these studies show that offsite contamination in excess of Water Quality Control Commission (WQCC) standards, or of toxic pollutants has occurred and is continuing to occur, OCD will require Navajo Refining Company to submit a discharge plan modification to OCD within 120 days of the date OCD notifies the refinery that such a modification is necessary. OCD needs current EPA-required reports and correspondence to determine the necessity of requiring a discharge plan modification.

3. Navajo Refining Company will be required to submit plans for testing and demonstrate integrity of its three-mile long effluent pipeline between the main refinery complex and the disposal ponds prior to renewal of the discharge plan. 4

Reason: Because of the failure of a major buried flowline that was installed less than five years at another OCD-regulated facility, OCD will require the effluent line to be tested before the normal 20 to 25 year period required of other wastewater lines at the facility. This line will be nine years old at the time of discharge plan renewal and an undetected break or major leak could cause significant contamination in the shallow ground water along the pipeline route.

The discharge plan consists of the application and supplemental material submitted to the Oil Conservation Division as shown on Attachment A which is made part of this approval. The discharge plan submittal did not include information on the existing Truck Bypass landfarm, nor, by previous agreement, did it include remedial activities for remediation of previous spills or leaks of hydrocarbons. By separate correspondence, OCD will require submittal of information and approval for these individual activities.

Monitoring and reporting of effluent discharge and ground water in the vicinity of the evaporation ponds shall be as shown in Attachment B included as part of this approval. Except for the change in dates, this schedule was previously presented and agreed upon in OCD and Navajo Refining Company correspondence dated May 22, 1990 and July 5, 1990, respectively. No ground water monitoring is being required at the main refinery complex at this time, however such monitoring may be required as part of the Truck Bypass landfarm discharge plan modification and as a result of remedial activities not included in the current discharge plan. 4

Navajo Refining company will provide OCD with timely notification of the discovery of above or below ground spills, leaks or other discharges of crude or refined product, chemicals, wastewater or other contaminants in accordance with WQCC Regulation 1-203 and OCD's letter to Navajo Refining Company dated February 22, 1990.

The discharge plan was submitted pursuant to Section 3-106 of the Water Quality Control Commission Regulations. It is approved pursuant to section 3-109.A. Please note

Mr. David G. Griffin
October 21, 1991
Page 3

Section 3-109.F., which provides for possible future amendments of the plan. Please be advised that approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters or the environment which may be actionable under other local, state, or federal laws and/or regulations.

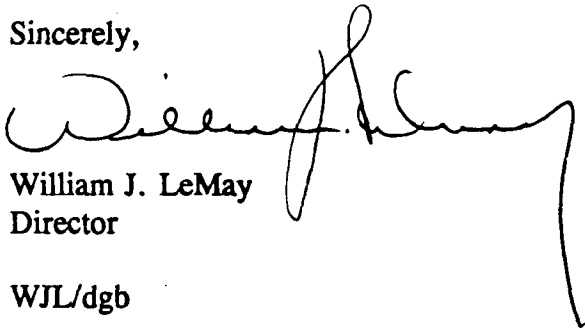
Please be advised that all exposed pits, including lined pits and open top tanks (tanks exceeding 16 feet in diameter), shall be screened, netted or otherwise rendered nonhazardous to wildlife including migratory birds.

Please note that section 3-104 of the regulations requires that "When a plan has been approved, discharges must be consistent with the terms and conditions of the plan". Pursuant to Section 3-107.C., you are required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3-109.G.4., this plan approval is for a period of five years. This approval will expire October 21, 1996, and you should submit an application for renewal in ample time before that date. It should be noted that all gas processing plants and oil refineries in excess of twenty five years of age will be required to submit plans for, or the results of an underground drainage testing program as a requirement for discharge plan submittal. As previously agreed (OCD letter dated 10/16/90), waste piping identified as being over 25 years old as of January 1, 1991, is required to be tested prior to discharge plan renewal.

On behalf of the staff of the Oil Conservation Division, I wish to thank you, Matt Clifton and Zeke Sherman for your cooperation during this very lengthy discharge plan review.

Sincerely,



William J. LeMay
Director

WJL/dgb

Attachments

cc: OCD Artesia District Office

ATTACHMENT A

LIST OF SUBMITTALS AND AGREEMENTS

Discharge Plan GW-28

Navajo Refinery, Eddy County, NM



<u>Date</u>	<u>Source</u>	<u>Brief Description</u>
December 7, 1984	Navajo	Site hydrogeology and process descriptions
February 25, 1985	Navajo	Effluent flow and chemical characteristics of waste streams
March 5, 1985	Navajo	Response to 2-7-85 OCD comments
March 8, 1985	Navajo	Agreement to comply with WQCC Section 1-203.A.
July 31, 1985	Navajo	Discharge plan application
August 19, 1986	Navajo	Specifications for the wastewater treatment plant
November 10, 1987	Navajo	Specifications for influent and effluent pipelines
December 24, 1986	Navajo	Evaporation pond, proposed hydrologic investigations
June 1, 1987	Navajo	Final report, evaporation pond investigations
January 11, 1988	Navajo	Correction of inspection deficiencies, evap. pond freeboard
February 11, 1988	OCD	Listing of DP commitments agreed to at 2-11-88 meeting
March 17, 1988	Navajo	Specifications for evaporation pond expansion
March 31, 1988	Navajo	Inventory and test procedure for underground product lines
May 3, 1988	Navajo	Navajo SPCC plan
June 7, 1988	Navajo	Report on progress meeting DP commitments
September 29, 1988	Navajo	Report on progress meeting DP commitments
December 23, 1988	Navajo	Report on progress meeting DP commitments
January 24, 1989	Navajo	Specifications for spill containment: CBO loading, salt filters
November 6, 1989	Navajo	Evaporation pond area, monitor well elevation survey
February 7, 1990	Navajo	In-service notification for evaporation pond #6
February 22, 1990	OCD	Requirements for spill notification
May 10, 1990	Navajo	Land acquisition, evaporation ponds
July 5, 1990	Navajo	"Housekeeping", and ground water monitoring commitments
July 12, 1990	Navajo	Catchment and drainage drawings for storage tanks
November 12, 1990	Navajo	Pit closure, underground waste piping report proposal
February 12, 1991	Navajo	Drawings of underground wastewater lines
February 26, 1991	Navajo	Backfill of asphalt pit
April 25, 1991	Navajo	Construction drawings, trickling filter

ATTACHMENT B

GROUND WATER MONITORING AND REPORTING REQUIREMENTS

Discharge Plan GW-28

Navajo Refinery, Eddy County, New Mexico

1. Effluent from the pipeline shall be sampled annually where it enters the ponds. Field pH and conductivity shall be measured. Analysis shall include BTEX, major cations/anions* plus fluoride, WQCC metals and PAH's. 
2. OCD will require that the following wells be sampled on an annual/semi-annual basis beginning Fall 1991. To provide adequate coverage and provide warning of a possible problem, a staggered schedule is required: 

	Fall '91	Spring '92	Fall '92
MW-1	x	-	x
MW-2	x	-	x
MW-3	x	x	x
MW-4	x	x	x
MW-5	x	x	x
MW-6	x	x	-
MW-7	x	x	-
OCD-1	x	x	-
OCD-2	x	-	x
OCD-3	x	x	-
OCD-4	x	-	x
OCD-5	x	x	-
OCD-6	x	-	x
OCD-7	x	x	-
OCD-8	x	-	x

Subsequent year sampling will follow the staggered schedule shown for 1992. Please notify OCD two weeks in advance to provide us with an opportunity to split samples. Sampling shall include field measurements of water level, pH and conductivity; and laboratory analyses for BTEX, major cations/anions* plus fluoride, and in MW-4 and 6 naphthalene and mononaphthalene. Because MW-4 and MW-5 are located at the south property boundaries and have shown organic contamination previously, they will be monitored semiannually.

3. Reports of water analyses shall be provided to OCD within six weeks of the date of sampling by Navajo.

* Major cations/anions are sodium, potassium, calcium, magnesium, chloride, sulfate, carbonate and bicarbonate.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

November 13, 1996

CERTIFIED MAIL

RETURN RECEIPT NO. P-288-258-861

Mr. Phillip Youngblood
Navajo Refining Company
P. O. Drawer 159
Artesia, New Mexico 88211-0159

**RE: Discharge Plan GW-028
Artesia Refinery
Eddy County, New Mexico**

Dear Mr. Youngblood:

The groundwater discharge plan renewal, GW-028, for the Navajo Refining Company (Navajo) Artesia Refinery located in the SE/4 of Section 1, E/2 of Section 8, W/2 of Section 9, N/2 of Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico, **is hereby approved** under the conditions contained in the enclosed attachment. The discharge plan consists of the original discharge plan as approved October 21, 1991, and the discharge plan renewal application dated June 19, 1996. Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the New Mexico Oil Conservation Division (OCD) Santa Fe Office within five working days of receipt of this letter.**

The discharge plan was submitted pursuant to Section 3106 of the New Mexico Water Quality Control Commission (WQCC) Regulations. It is approved pursuant to Section 3109.A. Please note Sections 3109.E and 3109.F., which provide for possible future amendments or modifications of the plan. Please be advised that approval of this plan does not relieve Navajo of liability should operations result in pollution of surface water, ground water, or the environment.

Please be advised that all exposed pits, including lined pits and open tanks (tanks exceeding 16 feet in diameter), shall be screened, netted, or otherwise rendered nonhazardous to wildlife including migratory birds.

Mr. Philip Youngblood
November 13, 1996
Page 2

Please note that Section 3104 of the regulations require "When a facility has been approved, discharges must be consistent with the terms and conditions of the plan." Pursuant to Section 3107.C. Navajo is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

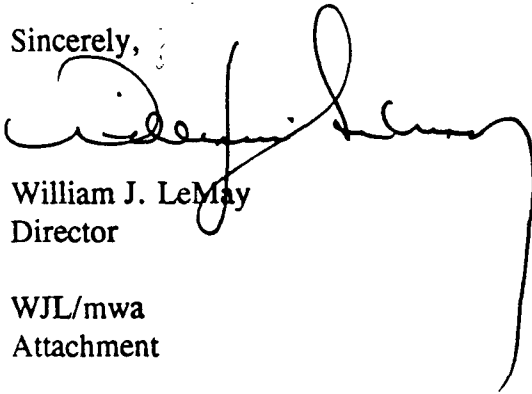
Pursuant to Section 3109.G.4., this plan is for a period of five years. This approval will expire on October 21, 2001, and Navajo should submit an application in ample time before this date. Note that under Section 3106.F. of the regulations, if a discharger submits a discharge plan renewal application at least 120 days before the discharge plan expires and is in compliance with the approved plan, then the existing discharge plan will not expire until the application for renewal has been approved or disapproved. It should be noted that all discharge plan facilities will be required to submit the results of an underground drainage testing program as a requirement for discharge plan renewal.

The discharge plan renewal application for the Navajo Refining Company Artesia Refinery is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan will be assessed a fee equal to the filing fee of \$50 plus one half of the flat fee or \$3,910 for refineries. The OCD has not received the \$50 filing fee or the \$3,910 flat fee. The \$50 filing fee is due upon receipt of this approval. The flat fee of \$3,910 may be paid in a single payment due on the date of the discharge plan approval or in five equal installments over the expected duration of the discharge plan. Installment payments shall be remitted yearly, with the first installment due on the date of the discharge plan approval and subsequent installments due on this date of each calendar year.

Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge plan review.

Sincerely,



William J. LeMay
Director

WJL/mwa
Attachment

xc: OCD Artesia Office