3R - 349

GENERAL CORRESPONDENCE

YEAR(S): 1984 - 1954

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

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Joseph Goldberg
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DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

April 24, 1984

Mr. John F. Eichelmann, Jr.
The El Paso Company
320 Galisteo, Suite 2
Santa Fe, NM 87501

RE: Comments on Report dated February, 1984 and titled "Proposed Remedial Work, Prewitt Refinery Site, McKinley County, New Mexico."

Dear Mr. Eichelmann:

The above report prepared by John W. Shomaker, Consulting Geologist, for El Paso Natural Gas Company and ARCO Oil and Gas Company (received March 2, 1984) has been reviewed by me with input from other EID staff members. The review primarily concentrates on the aspects of remedial work proposed in the report which are related to ground water contamination; additional information is needed on the specific nature and composition of the surface materials before other than general comments can be offered on the proposed surface reclamation.

The existence of ground water contamination at the old refinery site (previously owned and operated by both Malco (now ARCO) and El Paso Natural Gas Products Co.) was first documented by Cooper and John in the 1968 New Mexico State Engineer Technical Report 35: Geology and Ground-Water Occurrence in Southeastern McKinley County, New Mexico. In this report two wells, the "East" and "Gas" wells, were found to have gasoline on top of the water. Subsequent investigation by EID in 1983 found four other wells that were suspected of hydrocarbon contamination. The "Barnes" well (previously used for a drinking supply) and the "New Railroad" well (abandoned refinery supply well) had up to 1,300 parts per billion (ppb) and 116 ppb of benzene respectively in bailed samples taken in the spring of 1983. Additional tap water samples from the Barnes well contained between 85 and 405 ppb of benzene in four samples taken between December, 1982 and June, 1983. In two other wells, the "Lamance" well (used for domestic supply) and the "West" well (abandoned refinery supply well), hydrocarbon odors were detected during sampling but concentration levels were below detection when analyzed by the New Mexico Scientific Laboratory Division (SLD). All results of the EID sampling and SLD analyses are on file with the Ground Water and Hazardous Waste Bureau.

In my opinion, there are two remedial work objectives of primary importance. First, it is necessary to provide a safe domestic water supply for those wells now contaminated or likely to be contaminated by the hydrocarbon pollution plume. Second, it is vitally important to prevent current and/or future movement of contaminants into and between aquifers through wells open to the surface, and perforated in two or more aquifers or water bearing zones within a single formation. Surface reclamation, while important to protect the health and safety of persons and animals that may come in contact with hydrocarbon fluids and other residues remaining in the pits and separators, is in my opinion not as urgent as water supply replacement and protection of uncontaminated ground water. Stratigraphic evidence from the geologic log of the "New Railroad" well indicates the presence of at least 40 feet of shale between the surface and the first water sand (4 feet thick) which lies at a depth of about 81 feet. Even with the addition of precipitation (approximately 12 inches per year), the continued presence of fluids in several pits and concrete boxes after more than 25 years of disuse indicates low seepage rates, probably due both to natural conditions (low permeability shales and surface caliche), and sludge and tar residues in unlined pits.

Except as noted in the specific comments presented below, I find that the remedial actions proposed to provide an alternate domestic water supply to homes northeast of the site, and to protect ground water in other aquifers from future movement of contamination between aquifers, are generally adequate. However, the report does not address possible future contamination at the Baca Navajo Indian chapter well (formerly refinery "Trap" well - see comment 1), nor does it address any future actions to delineate the extent and potential for movement of the existing contaminant plume. Also, I believe that the proposed surface reclamation plan is severely deficient because fluid and residual contents of the pits and concrete boxes have not been adequately characterized as to composition or degree of hazard that would be posed by land-spreading the material over a larger surface area. Since additional and potentially hazardous non-refinery-generated materials may have been deposited in the pits over the past quarter-century, land-spreading and mixing before characterization may aggravate the problem with respect to enlarging and making more complex any future clean-up under the auspices of the "Superfund" program. Since immediate action is needed to prevent further human and animal (e.g. sheep, dogs, etc.) contact with the pits, El Paso and ARCO should consider securely fencing the entire area, or at least the pits containing viscous fluids, while a decision is made (in cooperation with affected federal, state and Indian entities) on the preferred method of surface reclamation. However, unresolved surface reclamation issues should not impede nor delay the initiation of measures to mitigate ground water contamination.

Specific Comments

1. The continued use of the former refinery "Trap" well (Shomaker, Figure 1; C & J, 13.11.18.221) as a public water supply well for the Baca Navajo Indian chapter should be addressed. This well is located only 300 feet from several of the pits still containing fluids. This 201 foot-deep well is also located about 1,200 feet from the "West" well which is

completed at the same depth and suspected by EID of being contaminated. No contamination was detected in the Baca chapter well in 1983 EID sampling, and the well is off-gradient to the suspected direction (northeast) of ground water movement. However, the potential for future contamination remains if heavy use causes the pumping cone of depression to intersect the contaminant plume. Unless and until that well is replaced or deepened both state and Indian health agencies should be aware of the potential for contamination and periodically monitor water for organic materials.

2. The specific refinery wells which are contaminated or suspected of being contaminated should be listed in Table 1 of Shomaker's report.

3. Water levels in the Chinle and the deeper San Andres-Glorieta aquifers should be determined whenever possible during drilling of the replacement domestic wells and prior to sampling of the refinery wells. Water level measurements will help in determining the potential for vertical migration of aquifer fluids between the Middle Chinle water-bearing sands and San Andres-Glorieta aquifer.

4. EID sampling detected contamination in the 790 foot-deep "New Railroad" well which is completed in both the Middle Chinle and the San Andres-Glorieta aquifers. The other two deep wells were blocked by debris but the "Old Railroad" well is also known to be completed in both formations. If the vertical gradient is downwards, the contamination at the "New Railroad" well could be migrating into the San Andres-Glorieta aquifer. Since the replacement wells to be completed in the San Andres-Glorieta are close to both "Railroad" wells, they should also be sampled upon completion and again periodically if a downward vertical gradient between aquifers exists.

5. Regarding the refinery wells to be plugged, no plan of action is presented if debris (e.g. concrete, steel pipe sections) in the well cannot be removed, or if the casing has collapsed.

6. Subsequent to clean out and prior to plugging, water samples at the old refinery wells are proposed to be sampled for volatile organic constituents. The EID suggests that EPA method 624, utilizing a gas chromatograph mass spectrometer, be employed to determine and quantify contaminants on EPA's list of priority pollutants. Common non-priority pollutants (e.g. EDB, xylenes and simple ketones) also will be quantified using this method. EID requests an opportunity to be on site during the sampling to collect and split samples for analyses.

7. In addition to the four wells having caps and locks that were shown south of the highway in Figure 3, the two "Railroad" wells north of the highway also have caps and locks. Keys are available at the EID Milan field office and the EID Ground Water Section in Santa Fe ("Abandoned Prewitt Refinery" file).

8. General comments on the proposed surface reclamation were summarized earlier. I believe it is important to stress that without chemical characterization of the fluids and sludges remaining in the pits, the proposed mixing of materials with clean soil, and land-spreading may be counterproductive. This would be especially true if more extensive clean-up, including possible removal of materials, is later necessary under future "Superfund" mitigation requirements.

Sincerely,

David G. Boyer by mss

David G. Boyer
Ground Water Hydrologist
Ground Water Section

DGB:egr

cc: Richard Perkins, Surveillance Section
Peter Pache, Hazardous Waste Section
Richard Mitzelfelt, EID District I, Manager
Ray Madson, EID Field Office, Grants
Joe Ramey, OCD, Santa Fe

PROPOSED REMEDIAL WORK, PREWITT REFINERY SITE, McKINLEY COUNTY, NEW MEXICO

by
John W. Shomaker
Consulting Geologist

Prepared for:

EL PASO NATURAL GAS COMPANY
ARCO OIL AND GAS COMPANY

February 1984

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Illustrations

PROPOSED REMEDIAL WORK, PREWITT REFINERY SITE, McKINLEY COUNTY, NEW MEXICO

by
John W. Shomaker
Consulting Geologist

INTRODUCTION

The purpose of this report is to outline the actions proposed for replacing certain water supply wells, which are or may become contaminated by hydrocarbon fluids, and for eliminating suspected sources of contamination, at and near the abandoned Prewitt Refinery.

Five wells are suspected to be contaminated by hydrocarbons, either as shown by analysis for organic constituents, or as indicated by remarks in published well records, or as indicated by color and odor. These wells are shown, along with other wells on the refinery grounds, on Fig. 1, and are listed in Table 1. Sludge and tar still remain in a number of places on the refinery grounds, as shown on Fig. 3.

One of the wells which is suspected to be contaminated serves for water supply for a private dwelling near the refinery site, and several additional wells (estimated at five) serve other nearby dwellings.

The objectives of the proposed remedial work are:

1. to secure a safe water supply to replace the wells that are still in use which are, or may become, contaminated. The private well suspected of contamination and the five nearby

private wells would be replaced.

2. to take steps to stop and/or prevent movement of water between aquifers, and in particular to isolate the uppermost aquifer, which is suspected to contain hydrocarbon contaminants.

3. to provide for biodegradation of hydrocarbon residues, sludges, and tars that remain on the surface.

The objectives upon which these proposals are based, and the general procedures proposed, are the result of consultation among representatives of El Paso Natural Gas Co. and ARCO Oil and Gas Co., and the writer.

REMEDIAL WORK

Replacement wells: It is proposed to drill a new water well to replace one existing well at each of six dwellings nearest the refinery site, as shown on Fig. 1, if the existing well is completed in an aquifer above the San Andres Limestone. The replacement wells would be completed in the San Andres-Glorieta aquifer; each well would be constructed as shown on Fig. 2, with 6 5/8 in. casing cemented top-to-bottom in an 8 3/4 in. hole drilled to the top of the San Andres-Glorieta, and a 5 5/8 in. hole drilled through the aquifer and lined with mill-slotted 4 1/2 in. casing. The wells would be constructed, cased, and cemented in accordance with State Engineer Office regulations for artesian well construction except that a variance would be sought to use welded casing. Each would be equipped with a suitable submersible pump, drop pipe, pitless adapter, sanitary seal and switching equipment, and the connection to the existing water

system provided.

Each of the private wells to be replaced will be plugged and abandoned after the replacement well has been completed and connected to the existing system. In each instance, an attempt will be made to pull the casing; if the attempt is not successful, then the casing will be perforated from the water level to bottom with a mechanical perforating tool. The well will be filled from bottom with cement, placed through a string of drill pipe or tubing, and the pipe or tubing then withdrawn and the filling completed. Pump-pressure will be applied to the cement-filled casing, if the casing has not been pulled, to force cement through the perforations and into the annulus outside the casing. The casing, if any, will be cut off approximately two feet below ground level, and the location cleaned up and releveled. A detailed report of each abandonment will be filed with the State Engineer Office in the required form, and these records will be included in the final report on the project.

Refinery wells: If contaminants are present, as suspected, in the shallowest aquifer beneath part of the refinery grounds and possibly some surrounding area, then communication between that aquifer and deeper aquifers should be prevented. Accordingly, it is proposed to plug and abandon all of the unused refinery wells in such a way as to positively prevent any movement of fluid in them.

There are thought to be three wells about 800 feet deep completed in the San Andres-Glorieta (see Table 1). Each of these will be cleaned out to total depth, if possible, using air

as a circulating medium unless water or mud is required to lift the cuttings, or it is perceived that a danger exists because of volatile fluid in the well. After the well has been circulated clean with air or clear water, it will be pumped by air lift or with a submersible pump to produce three or more casing volumes, and then a water sample will be taken near the top of the San Andres-Glorieta with a "thief" sampler or similar device. The sample will be analyzed for volatile organic constituents.

After the water sample has been taken, an attempt will be made to pull all of the casing and liner. If the liner cannot be pulled, it will be perforated from the water level to bottom with a mechanical perforating tool. If the liner is pulled successfully, but the casing cannot be pulled, an attempt will be made to perforate it. The well will be filled from bottom with cement through a string of drill pipe or tubing, the pipe or tubing withdrawn, and the filling completed. Pump pressure will be applied to the innermost casing or liner remaining, if any, to force cement through the perforations into the annulus outside it as effectively as possible. The casing and/or liner will be cut off at ground level and filled to the surface, if any unfilled volume remains, with rock or soil.

There are thought to be seven unused refinery wells about 200 feet deep, completed in the Sonsela Sandstone bed of the Chinle Formation (see Table 1). Each of these will be cleaned out to total depth if possible, using air as a circulating medium unless a danger is recognized because of volatile organic constituents in the fluid in the well. In such a case, the well will

Table 1. Unused refinery wells to be plugged and abandoned (locations shown on Fig. 1).

Name	C&J location no.[1]	expected depth
New Railroad	13.11.17.114	790 ft.
Old Railroad	13.11.17.123	774
Shop	13.11.18.223	803
House	13.11.17.133	200 ?
East	13.11.17.113	200
West	13.11.18.224	200
Bluewater	13.11.17.113a	240
Gas, no. 3	13.11.17.114a	200
---	13.11.18.122	200
---	13.11.17.141	196
"Possible"	[2]	?

[1] Cooper, J.B., and John, E.C. 1968, Geology and ground-water occurrence in southeastern McKinley County, New Mexico: N.M. State Eng. Tech. Rept. 35, Table 1.

[2] location in 13.11.18.224

be circulated with clear water. After the well has been circulated clean, it well be pumped by air lift or with a submersible pump to produce at least three casing volumes, and then a sample will be taken with a bailer from the top of the fluid column. The sample will be analyzed for volatile organic constituents.

After the water sample has been taken, an attempt will be made to pull the casing. If the casing cannot be pulled, it will be perforated from the water level to bottom with a mechanical perforating tool. The well will be filled from bottom with cement through a string of drill pipe or tubing, the pipe or tubing withdrawn and the filling completed. Pump pressure will be applied to the casing, if any remains, in order to force cement through the perforations into the annulus behind the pipe. The casing, if any, will be cut off at ground level and filled to suface with rock or soil.

A casing, which may or may not be a well ("possible well," Table 1), will be sounded with drill pipe. If it is a well, it will be cleaned out, sampled, plugged and abandoned following one or the other of the procedures described above, as indicated by the depth determined. If additional wells not shown in Table 1 are found on the refinery grounds, they will be dealt with in the same manner.

A detailed report of each abandonment will be filed with the State Engineer Office in the required form, and these records will be included in the final report on the project. Casing that is recovered will be hauled to Albuquerque and sold as scrap.

Surface reclamation: It is proposed to provide for biodegradation of hydrocarbon residues that remain on the surface by following the procedures outlined in the section below, titled Proposed Refinery Reclamation Project. The section was prepared by Sterling and Mataya, Engineers-Surveyors, Gallup, New Mexico, and follows the general plan formulated by representatives of El Paso and ARCO, and John Shomaker. Figure 3, which indicates the areas for which various procedures are proposed, is to accompany this section.

PROPOSED REFINERY RECLAMATION PROJECT

SUMMARY: The work in this project consists of mixing and processing soil to dilute and areate petroleum residues. Concrete boxes that presently serve as sumps for residues are to be cleaned out, filled-up and graded smooth. Old building materials and associated rubble are to be cleaned up and covered on-site.

Equipment to be used in reclamation work shall be standard earthwork equipment such as; backhoe, dozer, loader, disc, blade and possibly a scraper.

LOT 1 (AREA SOUTH OF US 66):

ITEM 1:

This item is for areas in which the soil appears darker then normal, slightly oily, or has clods loosely cemented by tars or asphaltic materials. Flat areas shall be thoroughly scarified, mixed and disced into place. Soil in localized areas that shows significant concentrations of petroleum residue may need to be transported to adjacent areas or may require additional soil imported from other areas for mixing. Dikes and berms shall be processed as above and blended into flat areas. Finished areas to be left in "loose" condition graded to prevent ponding or concentrated flow across processed area. More specific descriptions for proposed work is as described below:

1A - All berms and all flat area within berms to be processed as above.

1B - Process flat areas between R/W fence and berm as above, where needed.

1C - Process all berms as above and flat areas within berm where needed.

ITEM 2:

This area presently consists of ponds containing heavy concentrations of petroleum residues varying in consistency from that of water to highly viscous, sticky materials. Most of this material along with substantial quantities of underlying and adjacent soil, shall be excavated and transported to the south as shown. The materials are to be spread as directed and mixed and disced into the soil. The finished area shall be left in a "loose" condition, slightly mounded.

In addition, the excavated soil and residue will have to be replaced with clean soil, processed and mixed in place as above.

ITEM 3:

This item is for concrete box reclamation at locations shown and similar miscellaneous reclamation as may be required. Petroleum residue shall be removed from all concrete boxes and processed with soil as described in

items 1 and 2 above. Removal shall be done with "back-hoe" type equipment and/or pumps as required. Old piping that protrudes above ground level shall be removed. Box walls that rise above ground level shall be knocked down and into the box. The remaining box void shall be filled with soil and graded smooth. Certain boxes that have walls flush with the ground level may be used for containment of hazardous rubble and other material that may be encountered during site reclamation. Boxes used for such containment shall have all side and bottom openings plugged with concrete before placement of such materials.

This item shall also include clean-up of old furnaces that presently consist of structural steel ribs protruding from mounds of fire clay lining. Protruding steel shall be cut-off to approximate ground level. Mounds shall be spread, topped with soil and graded smooth.

ITEM 4:
This item is for reclamation of old buildings originally constructed of rock, wooden framing and stucco. Most of the materials have been knocked down and removed from the site. The remaining material shall be placed in excavated areas adjacent to the original structures. The material shall be placed in relatively thin layers then "walked in" by heavy equipment to acheive a certain degree of pulverizing and compaction. The old building material shall then be covered by a 8" to 10" layer of soil and graded smooth.

LOT 2 (AREA NORTH OF US 66):
ITEM 1N:
This item is for areas in which the soil appears darker than normal, slightly oily, or has clods loosely cemented by tars or asphaltic materials. Flat areas shall be thoroughly scarified, mixed and disced into place. Soil in localized areas that showns significant concentrations of petroleum residue may need to be transported to adjacent areas or may require additional soil imported from other areas for mixing. Finished areas to be left in "loose" condition graded to prevent ponding or concentrated flow across processed area.

REPORTS

Reports will be prepared which include a detailed account of all activities in plugging of wells, analyses of water samples, and logs and well records for replacement wells, all as required by the regulations of the State Engineer Office. A map and descriptive information as to the procedures carried out for surface reclamation will be prepared. All of these will be made available to the agencies whose jurisdictions include the Prewitt Refinery Project.

_____

John W. Shomaker
Consulting Geologist

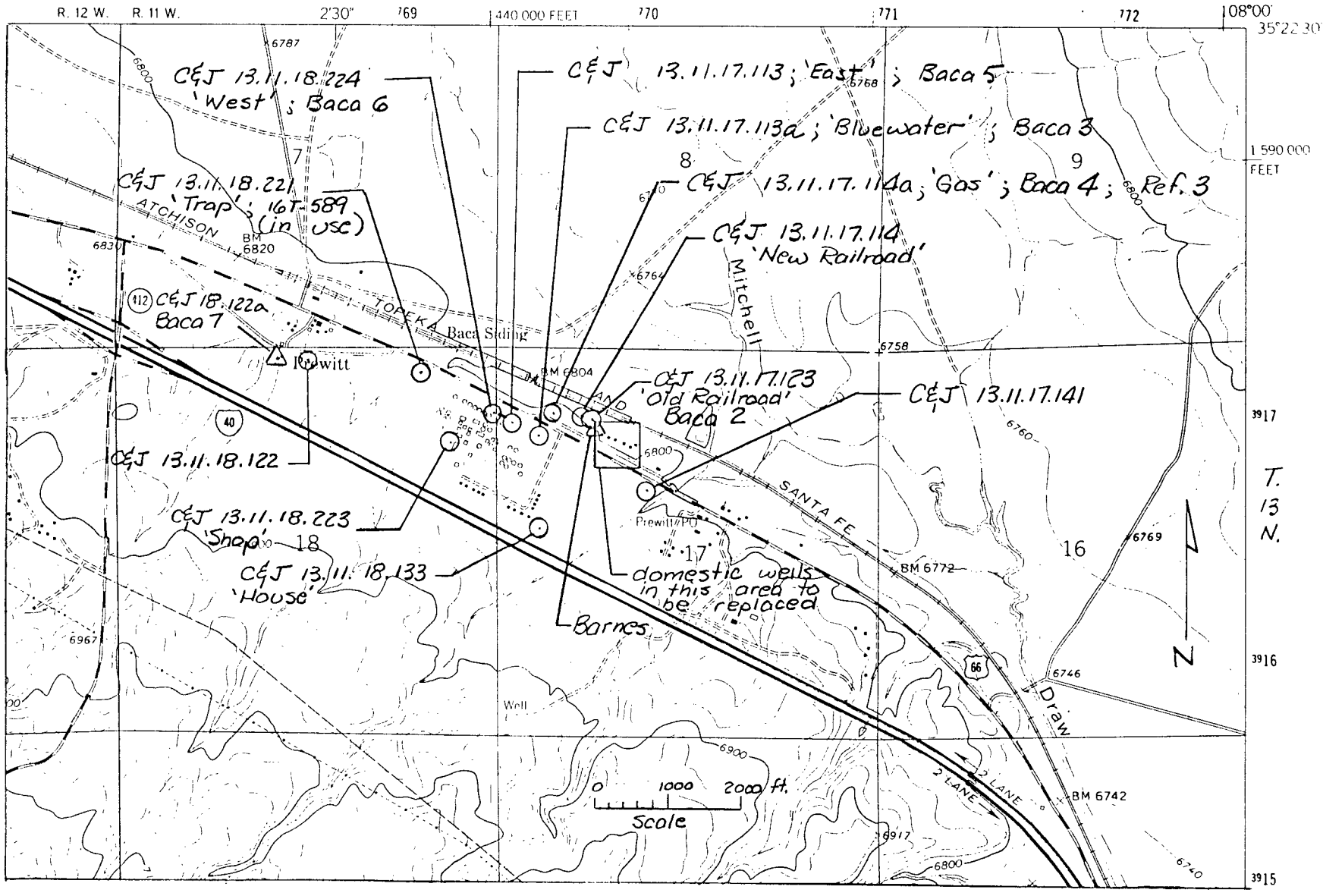


Figure 1. Prewitt Refinery wells (selected additional wells shown for reference); locations are approximate. 'C&J' number from Cooper and John, SEO Tech. Rept. 35. JWS 2-84

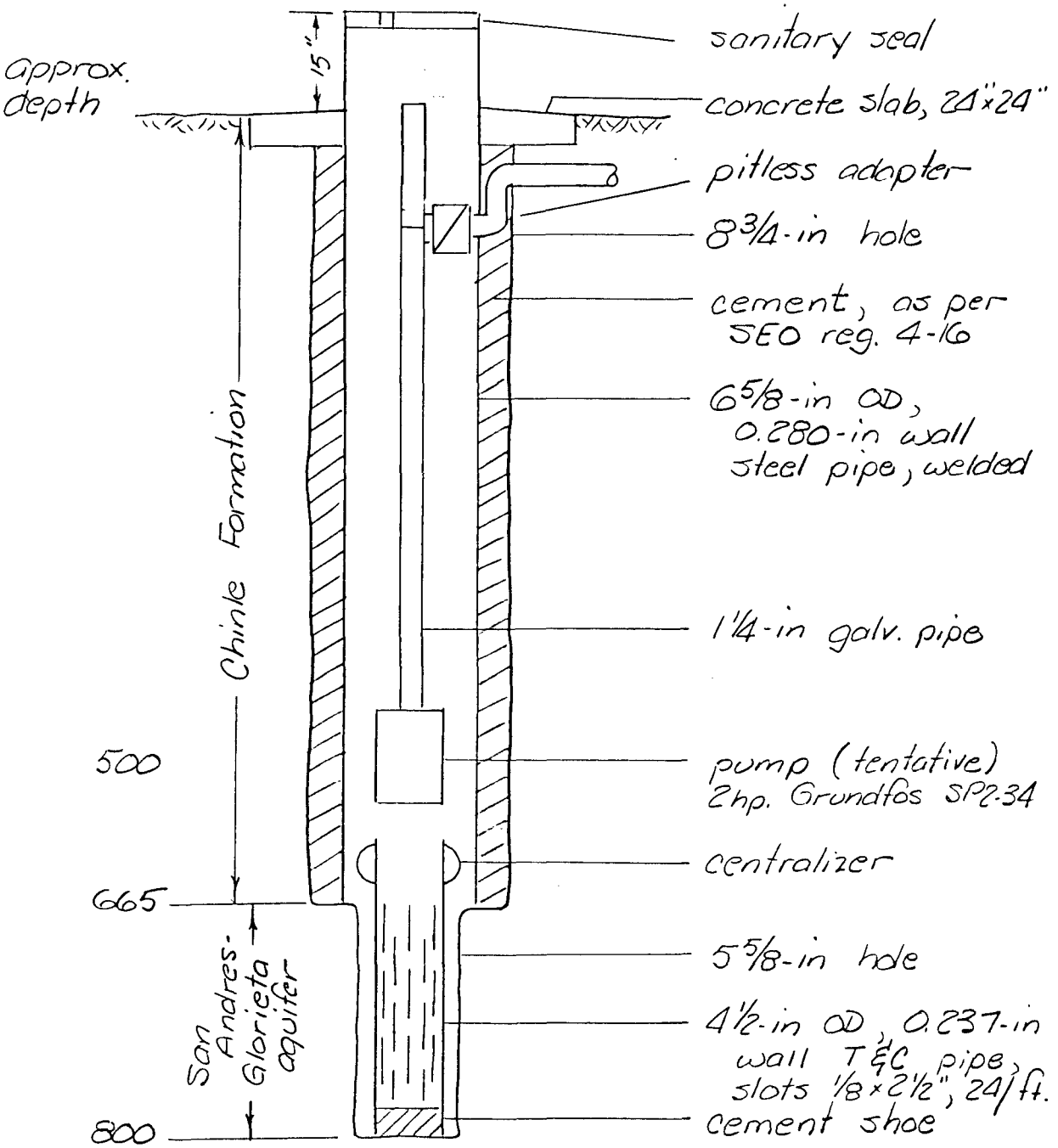


Figure 2. Typical replacement well (not to scale).

JWS 2-84

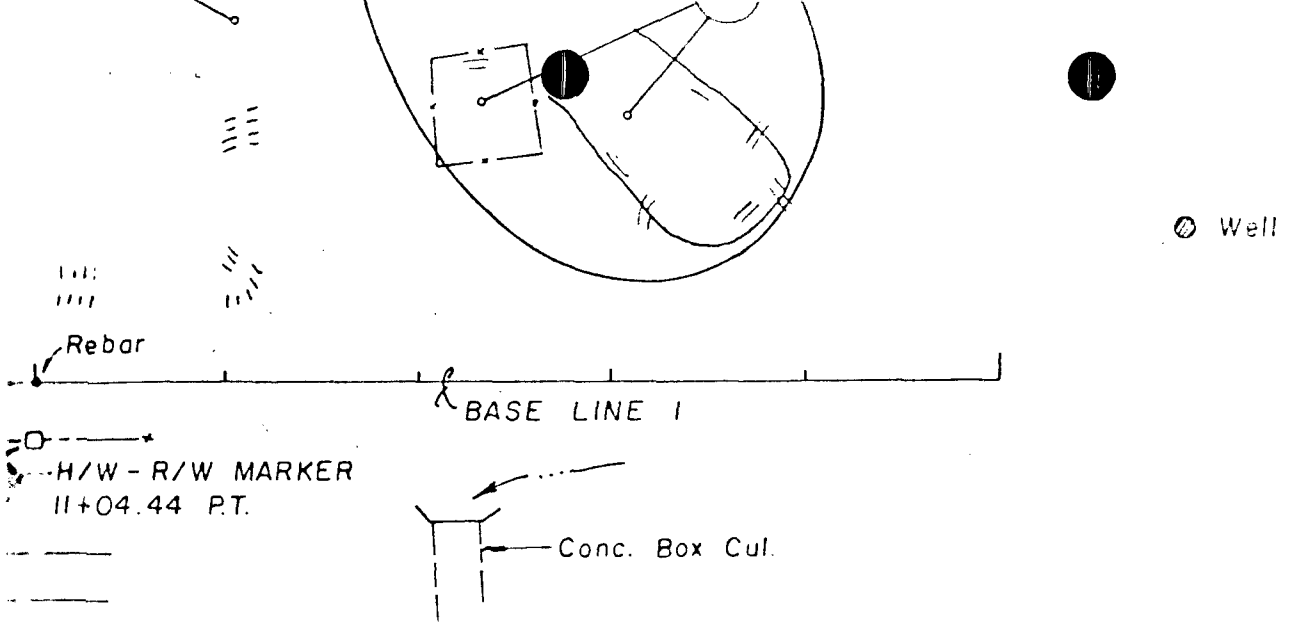


Figure 3.

PREWITT REFI[illegible]

RECLAMATION PROJE[illegible]

STERLI[illegible]

ENGINEE[illegible]

GALLU[illegible]

DATE: SCALE: 1"=

Addenda

Addendum Number One

Plugging Specifications and Supervision
as Required by the
New Mexico State Engineer Office

The following letters from J. W. Shomaker, March 13, 1984 to Charles A. Wohlenberg of New Mexico State Engineer Office District 1, Albuquerque, New Mexico; and from C. A. Wohlenberg, March 13, 1984 to John Shomaker are added to and made a part of this plan: Proposed Remedial Work, Prewitt Refinery Site, McKinley County, N.M., February 1984.

William F. Lorang, P.E.
3/24/84

JOHN W. SHOMAKER
CONSULTING GEOLOGIST
3236 CANDELARIA, N.E.
ALBUQUERQUE, NEW MEXICO 87107

(505) 884-2897

March 13, 1984

Mr. Charles A. Wohlenberg
State Engineer Office, District 1
2340 Menaul NE, Suite 206
Albuquerque, New Mexico 87107

Re: remedial work at Prewitt Refinery site

Dear Mr. Wohlenberg:

The following additions are to be made part of the Proposed Remedial Work, Prewitt Refinery Site, McKinley County, New Mexico, February 1984.

1. With respect to wells with more than one casing or liner string, if it does not prove to be feasible to pull the inner casing or liner, and in addition to perforate or pull the outer casing or liner, then both the inner and outer strings will be perforated with jet shots, no fewer than two shots in each 20-foot interval, through the Sonsela Bed of the Chinle Formation. Cement will be placed as described in the Proposed Remedial Work, using pressure at the wellhead to force cement through the perforations and into the annular space between the Sonsela and the casing and thus prevent movement of water in the annulus.

2. With respect to all wells that are plugged, a pressure test will be conducted after cement is placed if the level of cement in the well falls significantly.

Sincerely,

John W. Shomaker
Consulting Geologist

cc: Mr. Wm. F. Lorang, El Paso Natural Gas Co.
Mr. Raymond E. Howard, ARCO Oil and Gas Co.

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ALBUQUERQUE

March 13, 1984

S. E. REYNOLDS
STATE ENGINEER

DISTRICT 1
2340 MENAUL N.E. SUITE 208
ALBUQUERQUE, N.M. 87107-1884
PHONE: (505) [redacted]
841-8827

W.
John Shomaker
3236 Candelaria, NE
Albuquerque, New Mexico 87107

Dear Mr. Shomaker:

The proposed plugging specifications as described in your report, "Proposed Remedial Work, Prewitt Refinery Site, McKinley County, New Mexico", prepared for El Paso Natural Gas Co. and Arco Oil & Gas Co., February 1984 and in your letter of March 12, 1984 are acceptable.

Based on the available information on these wells, the proposed specifications appear sufficient. However unforeseen problems in one or more of the wells will require specific solutions. Therefore all of the plugging work will be done under the supervision of the State Engineer or his representative.

Very truly yours,

C. A. Wohlenberg
District 1

CAW:km

Addendum Number Two

Reseeding of Disturbed Areas

In accordance with a condition of entry of the site by the present land owner, the following statement is added to and made a part of this plan: Proposed Remedial Work, Prewitt Refinery Site, McKinley County, N.M., February 1984.

Where soil depth permits, those areas disturbed during site reclamation activities will be reseeded with native range grasses. The reseeding will be closely coordinated with the Navajo Nation, Division of Resources, Environmental Protection Administration and Land Department.

William F. Lorang, P.E.
3/24/84

I-40 R/W FENCE

Well

Bldg. Line, Old Residences

Bldg. Line Old Residences

BASE LINE 3

Tank on hill

BASE LINE 4

Grease pit old garage (Flush)

Machine Shop Rubble

Well?

Bldg. Ruin

Reclamation Area For Item 2

(Flush) pit

Old Bldg base

BERM (TYPICAL)

(Flush) Conc. box

Rubble Area

Furnace Ruin

(Flush) Conc. box

Old Cooling Tower Base

Old pipe, Water 6-7 ft – 5 1/2" O.D.

Conc.

Well (lock & cap) 6 5/8" O.D.

Well (lock & cap) 5 1/2" O.D.

Old Office Ruin

Well (lock & cap) 6 5/8" O.D.

Conc. Separator

Rock pit ?

Old pipe 5 1/2" O.D.

Ramp

Rebar

BASE LINE 1

H/W - R/W MARKER 11+04.44 P.T.

Conc. Box Cul.

U.S. 66

Well (lock & cap)

BASE LINE 2

Well

Well

R/W

Bridge

WBT

AT & SF W.B. TRACK

Scale: 1" = 100'

LEGEND

(No.) Indicates item number on written Reclamation Plan. See written plan for description.

Figure 3.

PREWITT REFINERY RECLAMATION PROJECT

STERLING & MATAYA
ENGINEERS-SURVEYORS
GALLUP, NEW MEXICO

DATE:	SCALE:	DRAWN BY: G.B.	SHEET 1 OF 1
Feb. 13, 84	1" = 100'	CHECKED BY: D.S.	

BRUNING 40-22 60430

3/2/84

EL Paso Natural Gas - EID Meeting Regarding Prewitt Site

David Boyer - NMEID Ground Water
JOHN SHOMAKER - Consulting Geologist, Albq.
David M. Kelsey - EPNG
P. E. Howard - ARCO Oil & Gas - Midland, Tx.
MAXINE S. GOAD NMEID Ground Water
ROBERT M. LOWY NMEID - Surveillance, RCRA 3012
Bruce Gallaher " " "
W F LORING EPNG Environmental Affairs
JOHN B. DRAPER Montgomery + Andrews 982-3873
John Eichelmann EPNG - Santa Fe 988-9809

March 2, 1984

Prewitt Refinery Meeting (Notes of Goad)

John Eichelman says that EPNG + ARCO have stated problem. Barnes has sued them.
For:
① Whatever caused original contamination was caused long ago, perhaps even before EPNG was involved with the facility.

② Presently ~~contaminated~~ site is not contributing to problem.

Draper says EPNG has come to an agreement with Barnes to put in new well + do remedial work at the property

John Shoemaker presented proposed larger remedial work on site in general
① Replacement wells for Barnes + neighbors
② Plugging old wells at refinery
③ Surface reclamation at refinery

ARCO & EPNG have agreed, to settle with Barnes and neighbors at site.

EPNG - has agreed to provide a water supply for Barnes and neighbors (not final for supply).

Three Phase Scheme:

1. Drill individual new wells for homeowners, plug & abandon old wells. New wells to be into San Andres-Glorietta

2. Plug all old water wells on site

3. Clean up site on surface

I asked (1) proper plugging
(2) Potentiometric surface
(3) Bass Chapter

Bruce asked hold up on plugging
[illegible] all wells [illegible]
[illegible]

Robbo says may need clean wells
etc.

3 -

STATE OF NEW MEXICO

OFFICE OF THE GOVERNOR

SANTA FE

87503

TONEY ANAYA
GOVERNOR

November 14, 1983

RN 1012

Honorable W.S. Eoff
State Senator
2000 McDevitt
Gallup, NM 87301

Dear Senator Eoff:

In response to your recent request for information on the Prewitt hydrocarbon contamination incident, the following facts were obtained from staff members at the Health and Environment Department's Environmental Improvement Division (EID).

In response to a citizen request in December, 1982, the EID sampled domestic wells in the vicinity of an abandoned gasoline refinery near Prewitt for hydrocarbon contamination. The well of Mr. Mabon Barnes located northeast and directly adjacent to the site was found to be contaminated with benzene (a constituent of gasoline) in excess of the New Mexico human health ground water standard of 0.01 mg/l. Repeat samplings through the summer of 1983 showed levels of benzene ranging from 0.085 to 1.30 mg/l. Additionally, other hydrocarbon contaminants (toluene, xylene, ethylbenzene) were detected in this well though not at levels detected for benzene. Other private domestic wells adjacent and directly to the east of the Barnes residence were similarly sampled but no detectable hydrocarbon contamination was observed. Members of the Barnes residence were informed that their well water exceeded the benzene standard and currently they are hauling water for all domestic uses, including drinking. The other families continue to use their individual wells.

The site of the abandoned refinery, which was previously owned by El Paso Products Company and MALCO Refinery (now ARCO), was sold in 1966 to the Navajo Tribe and tribal members in the area. A former refinery water well on-site immediately to the west of the processing buildings and tanks is now used by the Baca Navajo Chapter for community supplies. This well was sampled this summer (1983) in cooperation with the Indian Health Service, and no hydrocarbon contamination has been detected to date. However, several other unplugged, uncapped former water supply wells exist on site and the EID was able to obtain water samples from two wells not filled with debris. These wells (closer to the Barnes residence than to the Baca Navajo Chapter well) had concentrations of benzene ranging from 0.047 to 0.116 mg/l. Resampling will be conducted at the refinery site and at the domestic wells later this fall.

The exact mechanism allowing aquifer contamination by benzene and related hydrocarbons remains to be determined. Several unlined pits, and below-grade concrete structures remain at the site and still contain oil, tars and other

hydrocarbon materials, even though the refinery ceased operation in the mid-1950's. A more likely source of the ground water contamination is leakage from spills and surface discharges during operation down the outside casing of those water supply wells located in the center of the facility.

The operation of the facility (and likely the contamination) occurred prior to adoption of the Water Quality Control Commission Ground Water Regulations in 1977. These regulations address ground water protection at both new and active existing facilities. Abandoned facilities and clean-up of pollution which occurred before the various laws and regulations were in effect present difficult technical and regulatory problems. Within the past month, the EID has begun an EPA-funded assessment of sites for possible future inclusion on EPA's "Superfund" clean-up list. The Prewitt refinery site is one of several sites state-wide targeted for intensive study, including the possible drilling in six to eight months of monitoring wells to delineate the extent, size, movement, and concentration of the contaminant plume. No money is available under this study for clean-up of ground water contamination, but results of the assessment will be used in determining possible inclusion and ranking of the Prewitt site on EPA's "Superfund" list. Addition of the site to the "Superfund" list would make EPA resources available for cleanup under the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980. Additionally, it is EID's understanding that litigation is pending between the former refinery owner(s) and Mr. Barnes regarding mitigation of possible health effects and loss of property due to former refinery activities. The EID is unaware of the present status of this litigation.

If you have any further questions please feel free to contact me or Steven Asher, Director of the Environmental Improvement Division at your convenience.

Sincerely,

Robert McNeill
Chief of Staff
Office of the Governor

RN:SA:jba

cc: Steven Asher, EID Director

05/17/83

West Well - EPNG
(Edge of Casing Near Lockeye)

Hold	61.00	70.00
cut	13.98	2.98
	67.02	67.02
MP	.63	.63 (Concrete Pad)
DTW	66.39	66.39

Water Sample for Organics, Pb & heavy metals
8305171822

ODER on Sample
Spill sample with John Shoemaker, consultant for EPNG. Others present Tim Reed, Ed Milan, Boyer and Steve Oppenheimer EIR S.F.

05/17/83

New Railroad Well - EPNG
Prewitt
(Edge of casing Near Lockeye)

Hold	61.00	60.00
cut	3.83	2.82
	57.17	57.18
MP	1.24	1.24 Concrete Pad under Lockeye
DTW	55.93	55.94

Bottom of well (or bridge) at 173-174' BMP
Water Sample 8305171914
Strong odor in sample
Split sample with Shoemaker. Sample for organics, Pb & heavy metals (Cr, Fe, Mn, Ba)

05/18/83

OLD RR Well

Set-up 1000

Tried hammering 20' section of 2" gal. steel pipe with 1¼ Johnson drive point into hole. Debris at 5-8 Feet at start. Technique was to have 3 persons lift section and let it drop. Debris did not move or free up. Lunch at Barnes at noon.

Set up ⊕ 1⅝ (1⅜?) drill rod with rock bit to see if could drill thru debris. 3" Plug (sub) between rod and bit presented debris from moving past plug in 5⅝ (5¾?) ID casing. Bit and rod completed debris and presented further downhole movement.

Maximum depth with this method was ~11 feet.

Left site about 3:30PM

(Present at Site: Boyer, Reed, Oppenheimer, Shoemaker & Barnes)

05/18/83

House well

4PM Set up on well

Debris noted at about 30 ft
Began drilling as at
Old RR well. Bit moved
thru debris easier be-
cause of larger diameter
of casing (6 5/8"). Drilled
95 feet before beginning
to pull out at 7:15 PM.
Pulling out hard because
debris was above bit
which required rotating
out instead of using wire
cable. Left field about
8:15 PM, At Field Office 8:45
Sample prep. until 9:30 PM

05/19/83

Arrived at site 8:45 AM
and set up. ~~Hole~~ Debris
had refilled hole back
up to starting point.

Hoped that could drill
through and put 2" pipe
and point in to allow
sampling.

At 80 feet (9:50 AM)
Stopped due to cold wind
and snow!

10:40 AM – Begin drilling
again. At 100 ft of pipe
in the hole, could make
no more progress. Bit
rotated but pressure
downhole did not free
obstruction so began
pulling out. 12:20
PM, break for lunch
and to avoid electrical
storm, rain and hail.
1:30 Return to hole and
pulling out. Reporter
(from Gallup Independent
(Dave Carlson) present

along with John Shomaker, Consultant for EPNG. Hard to break pipe sections.
2:40 Pulled bit out along with wood, rock and other debris ~~including~~ including plastic trifle. Left hole open, as we found it.
(Present at site: Boyd, Reed, Oppenheimer, Shomaker)

East Well - Plugged to 8 ft of surface with debris & 2" pipe and or coupling

Gas Well & Bluewater Well - Plugged to ~ 5 ft of surface with debris (rock, lumber, etc)

16 T 58 - Boca Chapley Well (may be "Trap" Well) Locked, no sample

West Well - Sampled for Organics, Cations-Anions 05/17/83 1552

New RR Well -

Sampled 05/19/83 1646 for organics, Cat-Anion

Both wells Sampled by Boyd, Reed, Shomaker

OFFICE (505) 884-2897

JOHN W. SHOMAKER
CONSULTING GEOLOGIST

HOME
(505) 821-2358

3236 CANDELARIA RD., NE
ALBUQUERQUE, N.M. 87107

The Inn
287-7741
[285-6391]

June 8, 1983 Trip
In 8:30 AM
Left SF 10:40 AM

Left NLR 1PM
ARR Milan 2:30 (4hrs 0t)
ARR Prewitt 4:30
ARR Grants 9 PM
(E.D office)
6/9 Leave Grants ~~8AM~~ 8:15
ARR Prewitt 8:40
LV. Prewitt 12 Noon
ARR NoseRock 1:30
LV NoseRock 4:30
ARR Lake Valley 6PM
LV Lake Valley 8:45
ARR Grants 10:30PM (5.5hrs OT)
F. Nesb Hubbell 876-3787
Gene Heck (602) 871-6651
Phillips N.R. Jeff Tappen 786-5866
786-7366

6/10 ARR. SF 3:50PM

Interview with Alaben Bennett
6/8/83

Well First Drilled 1960-61
Drilled by Ted Griffiths
& Jr. ~~Keller~~ Kiser
(~~don't~~ does this fulltime)
both dead now.
(Rotary rig no bailer)
First Drilled depth
approx 87 Feet

Slots cut 20-25 feet
from bottom

Depth to water 35-40 from
top.

First pump was jet
pump (~~was~~ couldn't
make over 5gpm), suppose
to make 10 gpm)

First well was poor producer and ~~the~~ water had rust, lime and ruined clothes

Tests first noted in old well about one year after completed (when bailed, tested like gas)

Second well drilled in spring Summer 1963 by Mr. Herb Hubbell

Location appox 5 feet south of old well. Old well filled with rock, sand & old casing (Old casing was being pulled to drill new well and broke off at first joint of well already)

Don't know if Hubbell kept a log. Drilled w cable tool

Paid for 187 feet

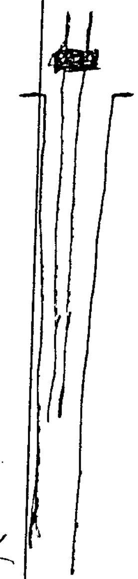
Water came in at 173 to 180 feet. Completion unknown but suspected cut slots. Barnes suspects (but doesn't know for sure) that well perforated 7-8 ft off bottom for one section of casing (about 22-24)

Casing was iron pipe (oil field type, not cast iron) 7" casing (prop ID). Welded sections, not coupled.

Barnes instructed specifically that upon

(80-87') section of water be sealed off.

New well was "sealed" by rubber from truck tire rim wired about drill pipe and placed in hole. Barnes suspects it may have slipped as pipe put down hole (as rubber band on pencil)



Mrs Barnes says the knows hole had sloughed about 5-10 feet below first water. Drilled with "jars" after that. Wonders if sloughing came from first well (Though mud didn't shrink much)

Well cemented at surface but don't know how far down placed cement or what is below it.

(Don't know for sure how well completed around outside of casing)

Noticed that New well began tasting bad about after 6 months and has been getting worse.

When first completed, water came up to about 60 feet of the surface. (Static level 61.0 feet from top of casing.)

Examined well and casing. No place to drop a tape, one hole for electric cable. Pump set at ~170 feet [illegible] by my/on rope

Interview with
Kenneth Polk
(wife Mauline)
Have ~~led~~ lived at site
for 8 years, Original
owner was Jack &
Eula Best in Farmington
(~~E~~El Camino Drive)

(Brother in law lives
next door Tracy Lamance)

This well has pump
at 147 feet (don't
know how deep)

Never noticed any
taste or odor except
when pump shut
off and Polk gets
water from Lamance
next door via cross-
connection. When Lamance
water in use by Polk, smell
in washer and in glasses.
Distance from [illegible] well [illegible], [illegible]

Ken Polk well
(PO Box 367, Prewitt, 87045)
830608 1706 [CAMC]
Sample from Tap at pump
Temp 18°C

Sp. cond 425 µmhos

pH 6.9

Mabon Barnes well
(P.O. Box 24, Prewitt 87045
830608 1743
Sample from tap at SE Hack corner
Temp 16.5°C
Sp. Cond 540 µmhos
pH (#1) 6.8
(#2) 6.96 [CAMC]

	Near RR well		6/8/83
Hold	60.000	60.000	
cut	1.92	1.925	
	58.08	58.075	
MP	1.26	1.25	concrete pad under Lockup
	56.83	56.825	

Near RR well (con't)
830608 1827 [CAMC]
Temp 16.5°C
Sp. Cond 335 µmhos
pH 8.5 Strong solvent odor

Near RR well
830608 1854 2nd Organic
Sample after 4 hails
~~with WWW PVC~~
with 1¼" ID, 5 FT long PVC

West well	SINC	6/8/83
Hold 69.07	69.07	69.07
cut 1.57	1.54	1.54
67.43	67.46	67.46
MP 0.64	0.64	1.64
(Pad to Base of Pole) 66.79	66.82	66.82

West Well EPNG (con't)

830608 1947 [CAMC]

Temp 15.5°C
Sp Cond 355
pH 8.5, 8.3
Hydrocarbon odor

2nd organic sample
after 4 bails
830608 1956 [O]

Charles T Lamance
P.O. 5? Prewitt

Has not noticed taste
or odor, but uncovered
day. These not used
to it say ~~ha~~ it has
taste & odor (Lamance
works at Cinega Refinery)

Well drilled in 1959, went
down to 110 feet, not
enough water, in 1961
went down to 180 feet

Hubbell deepened boring
original was Junior Kiser.

upper string not pulled
off. Slotted 10'-15'
by cutting torch up from
110 feet. Thinks lower
string cut same way.

original casing 5 inch casing, inner string 4 1/2 thin walled tubing

Inner casing sticks up some distance above bottom of upper string.

Water in shallow hole stood within 60 feet of surface

Water in deep hole stands about same, just more volume

Original well was rotary; Hubbell deepened with cable tool.

When new well drilled, upper not sealed; outside of casing not filled with mud or cement

Sanitary seal cement thought to extend downwards no more than ten well feet

---

Lamance well
(Sample from tap after pressure tank outside pump house)*)
830609 0913 [CAMO]

Temp 16.0°C

Sp. Conduct 575 umhos

pH 7.5
2nd 7.0
3rd 7.1

H/C odor when stirred in cup.

*well Located at NW corner of house.

BACA Chapter Well

16 T 589 [CAMO]

8306090955 after stand tank
Sample from discharge pipe ^

W. O. Willcox
P.O. Box 43 Prewitt
87045

Well drilled 1961 by
Willcox, Driller
was O.L. RAY
Expl. Uranium Driller
Drilled 210 feet, 196 feet
casing (remainder filled
in). Perforated bottom
40 feet with cutting torch

Water Level at 64 feet
down when new pump
installed in 1980

Well gravel packed from
10 feet above water level
to bottom. Drilled thru
40' sand and 10' clay on bottom.
Casing open to gravel
8 inches cement on surface

Diameter of hole 12 inches,
6 inches casing

Never any taste or oder
problem

Well Located on NW
corner of house

Mr. Willcox used to
work at plant. Oil
sumps were dirt sumps
allowing seepage.
(Started work ~~Worked~~ at plant in 1954)

Water in tank on hill used
for plant operations and picked
up hydrocarbons. Foot valves on wells → let contam. water back down wells.

Willcox Well
(sample from Tap at well (w/ Press Tank bypassed)
8306091104 [CAMD]

Temp 16.8°C
Sp Cond. 500 μmhos.

pH 7.05

No taste or odor noted

Willcox says wells to east (Sharp & Reynolds are deeper, completed in lower zones

When drilled Willcox with rotary, used mud which may have sealed of first water at about 110-130

Bob Burger
(cattle inspector, 1st house on right after RR X-ing at Prewitt 1130
No one home AM, 6/9/83

House well said to be piped to Elkins Ranch

(Note: Baca chapter well located between old refinery site and Burger House)

Interview with Herb Hubbell
(June 10, 1983)

Drilling records of wells were kept by Brother in Gallup, & turned over to either USGS or State Engineer. (Check with them on sources for copper & John)

In the 1950's two wells, one on each side of office bldg were contam. Had "pure gasoline" Hubbell says used in gas generator for wells and then in trucks

Water sandstone about 130-140 feet until about 180. When drilling, hole stayed open until cased and then cement or mud not filled around casing.

Hubbell thinks underground tanks and lines still are in place.

Suspects that leakage is around and down casing of wells; good thick formations between surface and 1st water (shale, ss, clay.)

Sampling of Homestake Wells
6/27/83

Rick Chavez - HMC Representative

Sub #1 — Installed Pump & Sampled 4" diam well

Hold 43.00 (Top of casing)
Cut 5.01
Depth to Water 37.99 feet 830627 0835
Depth of Well 77.1 feet + 0.6' WT = 77.7
Start Pump 0850, stop 0915
[Pump Rate 16 gpm] Start: 033367 gallons
Finish 033140

Sample 830627 ~~0845~~ 0913
[CAMN]
µmhos start: 1750
Stop: 1725, 11°C

HMC pH Meter dead - No good batteries

6/27 LV S.F. for Milan - 5AM, Lunch 12-1PM, Arrive Motel 5PM, Finish Filtering/Acidify 7PM [-1½hr 5-5:30] overtime 5 hrs 6/27
Forms 9:15-9:45

6/28 LV Milan for Homestake 7:30AM
Depart Homestake 4:30 PM
ARRive SF 7:10 PM
Overtime 2½ hrs

STATE OF NEW MEXICO
ENVIRONMENT

DATE: April 26, 1983

TO: File

FROM: Tim Reed, Environmentalist TR

SUBJECT: PROTECTIVE CAPS ON WELLS AT ABANDONED REFINERY, PREWITT, NM

On April 21, 1983 protective caps were welded in place on six (6) of the wells at the abandoned refinery near Prewitt, NM. The caps are welded to the well casing and are locked to prevent unauthorized access. All locks are keyed alike. The following is a list of the wells. Identification used is according to most recent literature search. If this identification is unlike the designation given in previous memoranda, it will be so noted in parenthesis.

DTW 1961 / Total Depth

200	59.4'	1. "Gas Well" #3	Baca # #4	17.114a
196	68.2	2. "New" Railroad Well		17.114 → Perf. all water bearing
174	145	3. "Old" Railroad Well		17.123
240(190)	80.2	4. "Bluewater" Well	#3	17,113a
205'	~~58.3'~~	5. ~~"Trap~~ West Well"	#6	~~18.221~~ 18.224
200'	79.6'	6. "East Well"	#5	17.113 (gasoline on top of water) (1961)

201 73.5 Trap Well 18.221

jq

RECEIVED
MAY 02 1983
EID: WATER POLLUTION CONTROL

ENVIRONMENTAL IMPROVEMENT DIVISION
New Mexico Health and Environment Department
P.O. BOX 2536
708 URANIUM AVE.
MILAN, N.M. 87021

NM1228

MAR 4 1983

Mr. Charles Nylander
New Mexico Environmental
Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87503

Dear Mr. Nylander:

This letter is in reference to a February 23, 1983 telephone conversation between Dave Boyer of your staff and Larry Wright of my staff. That conversation concerned the Prewitt Refinery site located near Prewitt, New Mexico.

Mr. Boyer asked about the eligibility of this site for listing on the National Priority List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As noted during the conversation between Mr. Boyer and Mr. Wright, Section 101(14) and Section 104(a)(2) of CERCLA exclude petroleum, including crude oil and any fraction thereof, from response under the Act. It is our understanding that the groundwater contamination at the site results primarily from gasoline from past site operations, although benzene has been detected in the groundwater at high levels. If the contamination results from gasoline only, this could severely impact the ranking of the site. Until we have more complete details about the site, however, we are unable to make the determination concerning the petroleum exclusion.

In order for the site to be listed on the NPL, it must be ranked using the Hazard Ranking System (HRS), as detailed in the July 16, 1982 Federal Register as an attachment to the National Oil and Hazardous Substances Contingency Plan. Please compile and submit all the data and information (technical and legal) available about the site and we will evaluate it and use it to rank the site using the HRS. Mr. Dwight Hoenig (214-767-9712, FTS 729-9712) is in charge of the section that does the ranking and your staff may contact him directly with questions concerning the ranking system.

If you have any questions concerning this matter, please contact me at (214) 767-9723 or Karen Solari of my staff at 767-9770.

Sincerely,
Original signed by
Dave Peters

Dave Peters
Deputy Project Officer (6ES-SH)

cc: Mr. Raymond Sisneros (NMEID)

bcc: Sam Nott (6AW-SE)
K. Malone (FITL)

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
STEVEN ASHER, Director

TONEY ANAYA
GOVERNOR

ROBERT McNEILL
SECRETARY

ROBERT L. LOVATO, M.A.P.A.
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

MEMORANDUM

TO: Prewitt Refinery File

FROM: Patrick Longmire, Geochemist, Liquid Waste/Ground Water Surveillance
David Boyer, Ground Water Hydrologist, Ground Water Section

SUBJ: Prewitt Hydrocarbon Incident

DATE: January 31, 1983 (finalized April 18, 1984)

On December 20, 1982, the EID Ground Water Section was notified of ground water-hydrocarbon contamination incident occurring in the vicinity of a disassembled petroleum refinery located at Prewitt, New Mexico. Based on available information, the refinery likely operated from the late 1930's until the mid to late 1950's. Because of the discussion given below, we conclude that the source of hydrocarbon contamination is most likely from the petroleum refinery.

On December 20, 1982, the EID Ground Water Section became aware of gasoline contamination in a private well owned by Mr. Mabon Barnes, located 0.3 miles northeast of the old refinery site. Mr. Barnes informed the Milan-EID office on December 7, 1982 about the hydrocarbon contamination in his well. On December 21, 22, and 28, 1982, and January 10, 12, and 14, 1983, Mr. Longmire talked with Mr. Tim Reed, EID-Milan office, regarding the hydrocarbon contamination at Prewitt. Mr. Reed apprised him to the latest sequence of events, which are summarized in a series of memoranda prepared by Mr. Reed, dated December 15, 27 and 28, 1982. An additional memorandum was received by Water Pollution Control Bureau on January 10, 1983. Please refer to Mr. Reed's memoranda for further details regarding this ground-water contamination problem.

The Barnes' have been consuming this water for approximately 17 years. Initial degradation of water quality in the Barnes' well probably began in 1965, according to Mr. Barnes. Two samples recently obtained from the Barnes' outside tap well on December 14, 1982, and January 1, 1983 by Mr. Reed, contained 185 and 280 ug/l benzene. Samples taken inside the house, after carbon filtration, on December 27, 1982, and January 4, 1983 showed less than 1 ug/l and 1.6 ug/l. The New Mexico Water Qualtiy Control Commission (WQCC) standard for benzene is 10 ug/l.

Benzene is moderately soluble in ground water, depending on pH and ionic strength. The solubility of benzene in a low ionic strength medium (e.g. uncontaminated ground water) with a neutral pH is approximately 820 ppm at 22°C. Degradation of ground water near the former Prewitt refinery, by hydrocarbon fuels, will probably continue to get worse with time. The more insoluble constituents of gasoline such as toluene, cyclohexane, cyclopentane, napthalenes and aliphatic compounds, are migrating at a much slower rate in the aquifer.

A review of readily available records show that ground water in the alluvium and Triassic Chinle Formation may have been degraded by gasoline and possibly other hydrocarbons since 1961. The ground-water flow in the Chinle sandstone is to the northeast in the vicinity of the refinery, (Cooper and John, 1968). On page 49 of the report, ground water in two wells at the refinery, completed in the Triassic Chinle sandstone, was reported to be contaminated with gasoline. Pertinent information relevant to the gasoline contamination is summarized below (Cooper and John, 1968).

Location	Owner	Total depth of well (feet)	Depth	Measurement date	Remarks
T13N, R11W Section 17.113	El Paso Natural Gas Co.	200	79.6	8/2/61	Gasoline on top of water. Prewitt Refinery
T13N, R11W Section 17.114a	El Paso Natural Gas Co.	200	59.4	8/2/61	Gasoline on top of water; Prewitt Refinery "Gas" well no. 3

In January, 1983 records used in preparing the Cooper and John study on Prewitt were obtained from the USGS in Albuquerque. Two wells at the site (Baca #5 or "East Well", and Baca #4 or "Gas Well") were reported by USGS staff on August 2, 1961 to have strong gasoline odors and gasoline on the measuring tapes. These are the wells reported in the Cooper and John study and listed above. Additionally, a letter dated July 6, 1954, from MALCO Refineries Inc. to the USGS in Albuquerque, included a sheet identifying the Baca #4 well as the "Gas Well" with the remark "well loss gasoline seepage." This indicates that at least one well located a short distance from the Barnes' well contained gasoline, as early as 1954. Results of a limited chemical analysis performed on a sample collected from this well in June, 1948 did not indicate any problems at that time.

The Cooper and John report lists the former Prewitt refinery as having eleven wells with eight completed only in the Chinle Formation, two completed in both the Chinle and the underlying San Andres Limestone, and the remaining well

completed in the San Andres and Glorieta Sandstone. Only the two wells listed in the table above contained gasoline according to Cooper and John (1968). It is possible that the hydrocarbon fuel has spilled or leaked from surface storage tanks at the Prewitt refinery into ground water and has affected water quality in the vicinity of the old refinery, including the Barnes' well completed in the Chinle Formation.

Evidence of intentional or unintentional surface discharges can be found at the site. Several tar pits have been located north and northwest of the refinery near the railroad tracks. These pits contain high-molecular weight hydrocarbon substances. The tars are viscous and consist of numerous types of long-chain carbon compounds, polynuclear aromatic hydrocarbons, and unsaturated ring compounds. The migration of tar and oil through the subsoil, eventually reaching ground water at a depth of 130 to 180 feet below ground surface, seems unlikely in a short-time span (e.g. 10-20 years). Furthermore, these railroad tar pits are not located hydraulically up gradient from the contaminated wells. Therefore these railroad tar pits are probably not a source of contamination of the Barnes' well.

Boyer and others (1980), after review of the Cooper and John report for the 1980 Surface Impoundment Assessment, stated that the hydrocarbon contamination in the Triassic Chinle Formation was possibly due to (1) surface discharges seeping down the borehole, (2) deliberate injection into the wells, or (3) surface discharges seeping through shale bedrock. However, the latter senario is unlikely.

Based on available information, it is unlikely that seepage of hydrocarbon fuel through the Upper Chinle Formation (estimated thickness up to 118 to 130 feet) could reach ground water in a period of 10 to 15 years. Estimated hydraulic conductivity of the siltstones and mudstones in the Chinle would range from 10^{-5} to 10^{-8} cm/sec (equivalent to 100 feet/1,000 years to 0.1 feet/1,000 years).

At the refinery site, the middle section of the Chinle Formation is a sandstone approximately 70 feet thick (Table 5, Cooper and John, 1968). It is also reported to be "a persistent aquifer" yielding water to domestic, stock, and industrial wells near Thoreau and Prewitt (Cooper and John, p. 21). Since stratigraphic logs show the sand zones beginning about 118 feet, and 1961 water levels at 59 to 79 feet, the aquifer may have been artesian in those locations. Another possible explanation for the shallower water levels may be that a thin sand or sandstone lense exists at that depth. The attachment to the July 6, 1954 MALCO letter listed a 2 foot-thick "Gray water sand (just a seep)" at 81 feet.

The extent of hydrocarbon contamination and direction and rate of migration of the hydrocarbon plume is uncertain with existing data. If contamination exists

in water sands of the Middle Chinle Formation it will move faster than if present only in the shales. It is possible that the eastern extent of the plume is located near the Barnes' well.' Additionally, the Barnes' well may be located hydraulically down gradient from the refinery, according to the data presented by Cooper and John (1968). It seems likely that the source of hydrocarbon contamination is from the direction of the now abandoned refinery.

Regulatory Implications

According to a memorandum written by Mr. Reed (received January 10, 1983 by Water Pollution Control) the title search of T13N, R11W, Section 17 and portions of Section 18 revealed that several companies owned the refinery property. The different ownerships of the refinery property are:

Prior to 10/30/41: Robert C. Prewitt
10/30/41 to 5/1/52: Petroleum Products Refining and Producing Company
5/1/52 to 3/16/55: MALCO Refineries, Inc.
3/16/55 to 1/10/56: New Mexico Asphalt and Refining Company (also called MALCO Asphalt and Refining Company)
1/10/56 to 1/18/66: El Paso Natural Gas Products Company
1/18/66 to present: LeRoy and Billie Navarre
12/6/66 to present: Navajo Tribe of Indians

(NOTE: In 1945 Petroleum Products acquired an additional parcel from Prewitt, and in 1966 the property was divided and sold to separate owners.)

In 1963, pursuant to Section 30-8-1 et seq. NMSA (1978) a public nuisance statute went into effect. Section 30-8-2 of the NMSA (1978) defines polluting water as consisting of "knowingly and unlawfully introducing any object or substance into any body of public water causing it to be offensive or dangerous for human or animal consumption or use." Polluting water constitutes a public nuisance. "For the purpose of this section, 'body of water,' means any public: river or tributary thereof...well or declared or known ground waters." At the time the public nuisance was adopted, El Paso Natural Gas Products Company was the property owner. However, operations had ceased several years earlier. Whether El Paso and other previous owners may be subject to the public nuisance statute of 1963 would require a legal determination.

The NMWQCC Regulations became effective in February, 1977. Since operation at the Prewitt Refinery occurred prior to the effective date of the NMWQCC Regulations, action that the EID can take under Part 3 of the regulations, is limited unless discharges to ground water are continuing from the remaining open hydrocarbon pits at the site.

Section 206.A. of the New Mexico Hazardous Waste Regulations, which became effective on January 6, 1983, are not applicable to the Prewitt situation because the former Prewitt Refinery is no longer in operation. The Resource Conservation Recovery Act (RCRA) applies to new or existing facilities and therefore, may not be applicable. The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund) would be applicable to this situation.

Conclusions and Technical Recommendations

1. Initial sampling detected benzene in a private well, used for drinking and domestic purposes, at levels approaching 20 to 30 times the NMWQCC standard of 10 ug/l.

2. The benzene found in samples, analyzed by Rick Meyerhein of the New Mexico State Laboratory Division, is indicative of gasoline.

3. The Barnes' family should try to obtain water from another source for drinking, cooking, and bathing purposes.

4. The ground-water contamination incident at Prewitt should be further investigated and included in the inventory of the hydrocarbon study currently being conducted by the EID.

5. As a result of the meeting held January 20, 1983, between the Environmental Improvement Division (EID) and Oil Conservation Division (OCD), it was agreed that the EID will take the lead in the investigation and coordinate with the OCD. The OCD will obtain information they think necessary for the investigation from the refiners.

6. If information is to be requested of refiners, the following questions should be asked:

   a. Are records available of amount of gasoline losses or contamination and if so, how much, when and where?

   b. Are the refiners aware of any leaky tanks or spillage of any kind while they owned the refinery or prior spillages?

   c. Where any petroleum products disposed of in a well or wells accidently or intentionally at the Prewitt refinery? If so, how many, which ones, when (time) and locations?

   d. Is there information on well construction details (casing materials, perforated interval(s), etc.) available for review by EID and OCD personnel?

e. Are there other wells, besides the "office well" and the well at 17.114, known to be contaminated with hydrocarbons? Suspected contamination includes Bluewater Well (water level at 240 feet), the old and new Railroad Wells. Provide well construction details for all wells.

Reference

Cooper J.B. and John E.C., 1968, Geology and ground-water occurrence in southeast McKinley County, New Mexico: Technical Report 35, New Mexico State Engineer

PL:DB:egr

cc: EID Field Office Milan
Oil Conservation Division, Santa Fe
Peter Pache, Hazardous Waste Section
Rick Meyerhein, SLD Albuquerque

STATE OF NEW MEXICO
ENVIRONMENT

(6)

DATE: December 15, 1982

TO: [illegible]

FROM: Tim Reed, TR Environmentalist

SUBJECT: Possible Groundwater Pollution

On December 14, 1982 a water sample was obtained from the private well at the home of Mabon Barnes, for testing of potential pollution from petroleum. On arriving at the Barnes residence, a glass of water was taken from the kitchen tap. The water had the definite odor of gasoline. A sample was then taken from the outside tap which is not filtered or otherwise treated. In questioning Mr. Barnes about the possible source of such contamination it was determined that a refinery had been in operation across the highway from his home, from 1939 to 1959. Mr. Barnes had been an employee there until its closing in 1959. I requested a tour of the abandoned site.

During the tour Mr. Barnes stated that some of the storage tanks, which had contained regular and ethyl-lead gasolines, were known to have leaked their contents. He showed me the sites where these leaking tanks once stood. One such site was entirely barren, in a perfect circle. No vegetation had grown in this spot since the refinery was dismantled around 1962. He recalled a situation where an employee neglected his operation of the mixing apparatus, allowing 2000-3000 gallons of gasoline to overflow almost every day for a period of 3-4 months. (A conservative estimate gives a figure of 144,000 gallons; 2000gals.X6 daysX12 weeks).
The "transfer pit" had cracks in its concrete foundation. At the end of the day, the 3" to 4" of gasoline in this pit would be left to leak out overnight.
Two of the water wells at the refinery were decommissioned due to pollution from gasoline. When asked for more detail on this Mr. Barnes said the chemist used a sedimentation method for testing the well water and he recalled a figure of 58% gasoline content in the water. "We couldn't use it because it was explosive".
The Barnes residence is approximately .4 of a mile from the position of the storage tank site, to the Northeast. Surface topography indicates that a hydrologic flow is to the Northeast. The use of water in mining activity could also possibly pull a plume of contamination toward the well used by the Barnes family.
Their well is 175 feet deep with the pump set at about 167 feet. The well is 20 years old. Approximately 18 months ago the pump was pulled. A black sludge had covered the inlet except for one hole, ½ inch in diameter. An odor similar to sewage or rotten eggs was prevalent. This could be indicative of sulfur bacteria. It was suggestd that a periodic dosage of chlorine bleach be continued.

MEMO TO FILE RE: POSSIBLE GROUNDWATER POLLUTION

Mr. Barnes developed chronic leukemia about 10 years ago. Mrs. Barnes suffers from dermatological disease at times. Due to these ailments, it would seem imperative that a good quality supply of water be available so as not to compount health problems. Bottled water was suggested and if fixed income will provide, the suggestion may be taken.

The results of the water analyses at SLD are not available as of December 15, 1982.

jq

DATE: December 28, 1982

RECEIVED

DEC 30 1982

EID: WATER POLLUTION CONTROL

TO: File

FROM: Tim Reed, Environmentalist TR

SUBJECT: BENZENE POLLUTION AT PREWITT, NM

On December 27, 1982 a sampling/survey was conducted of the private wells in the vicinity of Mabon Barnes residence. (The Barnes well has been analyzed positive for Benzene contamination.) The Mabon Barnes well is the furthest to the west. All other wells are located in line to the East. (see diagram)

The Barnes well was resampled for Benzene. This sample was taken after the Bon Dell activated carbon filter unit. A sample was also taken from the outside tap (unfiltered) to be analyzed for Pb, Mn and Fe levels.

Three other wells were sampled, to be analyzed for Benzene. One sample each from wells belonging to Kenneth Polk, Odell Willcox and Rosetta Reynolds. Every attempt was made to accomplish this survey without alarming the residence and causing premature anxiety. If this survey indicates a potential for Benzene contamination in these wells, I will schedule a meeting with the residence at the Prewitt Fire Station; provide all well owners with the same information and answer questions.

All wells sampled are in the Chinle formation. It is suggested that this aquifer may have been contaminated via wells which are not properly sealed; thus allowing upper aquifer contamination of hydrocarbon fuels to infiltrate the aquitard and enter the Chinle formation.

Mrs. Barnes asked for legal advice. She was informed that there are attorneys who are acquainted with hydrology and pollution terminology. I suggested she make inquiries and act on recommendations. She was also informed that the EID records are public records.

In contacting Oscar Simpson of the Oil Conservation Division I was informed that funds may be available for investigation of the pollution source.

The Barnes family has taken the suggestion to obtain drinking water from another source. They are transporting water from Milan in 5 gallon insulated water containers. I offered to approach the owner of the KOA to obtain permission for using water from his source. Mr. Barnes is independent and would prefer to make that request on his own behalf. Respectfully concurred.

jq

Tim Reed report

ATTACHMENT A

PREWITT

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-3.

Corresponding number on form	Additional Remark and/or Explanation
I.G.	Previous Site Owners - Operators: Oct, 1941: Petroleum Products Refining Co. leased property from R.C. Prewitt. Lease 6-253. Jan, 1944: Petroleum Products Refining and Producing Co (successor to Petroleum Products Refining Co) purchased, 75 000 acres from R.C. Prewitt, Refinery area and Railroad siding (Tracts A&B). Deed 12-447. Dec, 1946: 10 acres of the refinery tract deeded to Roy H. McKay. Quit claim Deed 4-286. May, 1952: Malco Refineries purchased the property from Petroleum Products Refining and Producing Co. Warranty deed 10-620. May, 1955: New Mexico Asphalt and Refining Co. purchased the property from Malco Refineries. Warranty deed 12-431 Malco purchased New Mexico Asphalt and Refining Co. and renamed it Malco Asphalt and Refining Co. Jan, 1956: El Paso Natural Gas Products Co. purchased the property from Malco Asphalt and Refining Co. Deed 14-753. Dec, 1966: The Navajo Tribe of Indians purchased the property from El Paso Products Co. (successor to El Paso Natural Gas Products Co.). Warranty Deed 17-83
I.i.	The site consists of two areas. Tract A, contains the refinery proper, south of Hwy 66, 68.216 acres. Tract B, contains a railroad siding, north of Hwy 66 and south of the ATSF right of way 6.784 acres. Tract A contains one waste pit that has been fenced (photo 8), one depressed area with stained soil that is not fenced(photo 9), an old oil water separator (photo 10) and other rubble and tank bases from equipment that has been removed. There are numerous diversion and containment dikes on the site.

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

MEMORANDUM

DATE: January 7, 1983

TO: File

FROM: Timothy C. Reed

SUBJECT: Title Search T13N, R11W, Sec. 17 and portions of Sec. 18

A title search of T13N, R11W, Sec. 17 and portions of Sec. 18 was conducted on January 6, 1983 for determination of ownership of property, for the purpose of acquiring information relating to possible Benzene contamination of groundwater in New Mexico.

This search revealed deeds recorded in McKinley County for above property, which was utilized for the processing, refining, or storage of petroleum products.

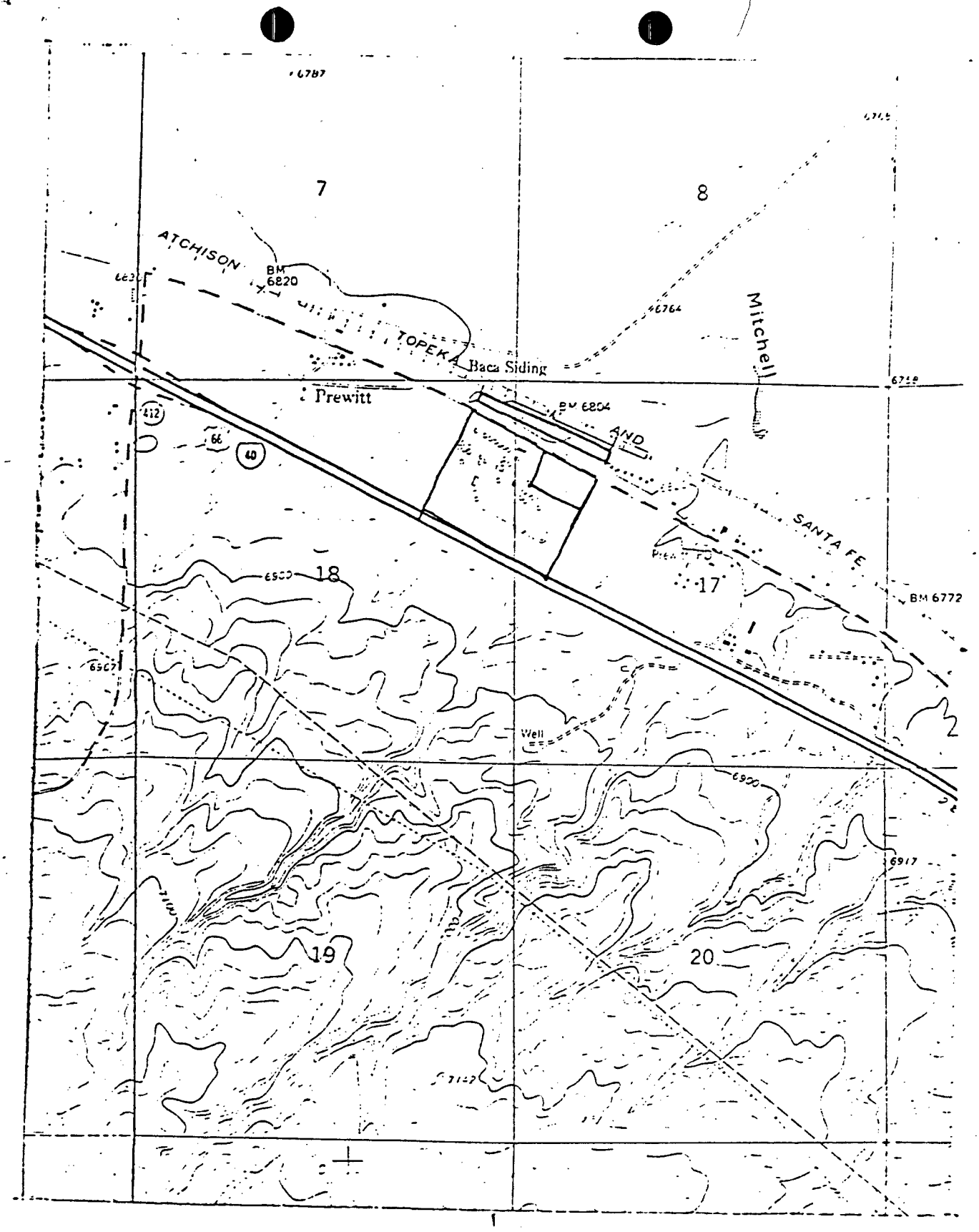
The following named entities have recorded deeds to this property:

El Paso Products Company 1967
Malco Ashphalt & Refining Company 1956
Malco Refineries, Inc. 1955
Petroleum Products Refining & Producing Company 1943

The search showed records dating from 1943 to 1967.

The entities above are listed with the most recent petroleum company first, and in order of Grantor,(1967to1943).

tr



Abandoned Refinery
Prewitt Tar Pits
Prewitt, New Mexico

East to Grants

I - 40

West to Gallup

NW. Sec. 17 and
of 18

Well (uncapped)

Old Water Tank (on hill)

Shop (Stone) remains

Well

mobile home

Tetra Ethyl Lead mixing

Old Tank Farm

Dump Station

Lava graveled access road

Well (Capped) condemned

Dirt Road

Oil Separator petroleum Still present

Crude oil

Crude Oil

From Thermocracting furnace

Well Baca Chapter Navajo Community WSS Code No. 16T589

.2 of a mile

Old Hwy 66

South East Corner Lot #2 Small Subdivision

Mobon Barnes

South west Corner Lot #1

Note: Mr. Barnes has Lots 1&2 of the Small Subdivision (Our deed see Book 22 pp 248-350 McKinley County)

Well (uncapped)

approximate section line

Sec. 17

Sec. 18

N

Bridge

A.T.S.F.

Bn 6504

Baca Siding

NM0/228

Helen

DEC 6 1982

RECEIVED
EPA REGION VI

1982 DEC -7 PM 1:20

SUPERFUND BRANCH

Mr. Tim Lassen
ATSF Railway Co.
5200 E. Shella Street
Los Angeles, CA 90040

Re: Request to Inspect Prewitt Tar Pits in Prewitt, NM

Dear Mr. Lassen:

This is to inform you that Ecology and Environment, Inc. (EEI), is a duly authorized consultant for the U.S. Environmental Protection Agency (EPA). Representatives from EEI may, upon presentation of a Letter of Introduction, enter any facility where hazardous materials are generated, stored, treated, disposed of, or transported to determine compliance with standards, regulations and permits issued pursuant to the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Specifically, this inspection is to determine if an "imminent and substantial endangerment to health of the environment" exists as described by Section 7003 of RCRA or Section 106 of CERCLA. Please be aware this inspection will not include a determination of compliance with RCRA Interim Status Standards. Authority to conduct this inspection is contained in Section 3007 of RCRA and Section 104 of CERCLA.

An inspection may include a review of records, taking photographs, and collecting samples. Representatives of EEI are authorized to collect information which is considered confidential. Any such information must be specified as confidential at the time of the inspection so that appropriate protective measures may be taken.

Mr. K. Malone, EEI, Field Inspection Team Leader, or a member of his staff, will contact you to arrange an inspection.

A copy of the inspection report and any analytical data for your facility may be obtained by writing to Sam Nott (6AW-SE), EPA Region 6, 1201 Elm Street, Dallas, Texas 75270.

6ES-SH:KSOLARI:kfh:x9770:12/6/82

I am enclosing, with this letter, a copy of a report on the site which was recently received in our office. The report is based on a December 15, 1982 inspection of the site by Ecology and Environment, Inc. The site was inspected as a result of its listing in our HAZSIT system.

If you have any other questions related to this matter, please feel free to call me at (214) 767-9709 or FTS 729-9709.

Sincerely yours,

for William Rhea

William B. Hathaway, Deputy Director
Air & Waste Manangment Division

Enclosure

bcc: NM 1228
Hoenig, 6AW-SO

EPA Notification of Hazardous Waste Site

NMS-000-001-024 000343 SE

Unit Envi Agen Wash

RECEI

JUN 10 198

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

Permit # NM0028?

6AEP

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: El Paso Products Company

Street: P.O. Box 3986, American Bank Building

City: Odessa State: Texas Zip Code: 79760

B Site Location: NMD98-062-2723

Enter the common name (if known) and actual location of the site.

Name of Site: Old Prewitt Refinery

Street: U.S. Highway 66 (just east of Prewitt on South Side of Highway 66)

City: Prewitt County: McKinley State: N.M. Zip Code: 87045

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Hughes, Michael P., Director, Env. Reg. Affairs

Phone: 915/333-7400

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): unknown To (Year): est. 1957 - shutdown

Purchased from Malco on Jan. 10, 1956

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☒ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☒ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☒ Other (Specify) Crude Refinery (4,000 BBL/Day)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

Hazardous Waste Site

Side Two

ntity:

n the appropriate boxes to
e facility types found at the site.

al facility waste amount" space
estimated combined quantity
e) of hazardous wastes at the site
ng cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☐ Landfill
4. ☐ Tanks
5. ☒ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Facility Waste Amount

cubic feet _____

gallons _____

Total Facility Area

square feet 1300

acres _____

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name Michael P. Hughes

Street El Paso Products Company, Bx. 3986

City Odessa State TX. Zip Code 79760

Signature Michael P. Hughes Date June 8, 1981

☐ Owner, Present
☒ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

EPA Notification of Hazardous Waste Site

NMS·000·001·027 000504

United States Environmental Protection Agency Washington DC 20460

RECEIVED

JUL 9 1981

OAEP

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Petroleum Products Refining and Producing Company

Street: c/o Jack V. McGlothlin, P. O. Box 5198

City: Abilene State: TX Zip Code: 79608

B Site Location: NMD98-062-2799

Enter the common name (if known) and actual location of the site.

Name of Site: Petroleum Product's Refinery

Street: UNKNOWN

City: PRewitt County: McKinley State: NM Zip Code: 87045

HAZ - NM0038

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Watrous, Ronald E., Attorney

Phone: 915/698-8800

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1938 To (Year): 1949

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I– Description of Site.

General Type of Waste: Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

_____

_____

_____

Source of Waste: Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

_____

_____

_____

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

K049		
K051		
K052		

Form Approved
OMB No. 2060-0138

Notification of Hazardous Waste Site — Side Two

F Waste Quantity

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☒ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet: unknown

gallons: _____

Total Facility Area

square feet: unknown

acres: _____

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

Closed petroleum refinery. Likely that wastewater treatment pond sludges and leaded tank bottoms were disposed of at site but no specific knowledge. No street address but only refinery ever located in town. Refinery closed in 1949.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name: Petroleum Products Refining & Producing Company

Street: c/o Jack V. McGlothlin, P. O. Box 5198

City: Abilene State: TX Zip Code: 79608

Signature: Jack V. McGlothlin Date: 6/15/81

☐ Owner, Present
☒ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

[FR Doc. 81-11500 Filed 4-14-81; 8:45 am]

BILLING CODE 6560-29-C

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8859-P
SAMPLE ID: [illegible]
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT):

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	~~UG/L OR~~ UG/G	EPA NO.	COMPOUND	UG/L OR UG/G
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC	↓	106	PCB-1242	↓
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN		109	PCB-1232	
101	HEPTACHLOR EPOXIDE		110	PCB-1248	
95	ENDOSULFAN I (A)		111	PCB-1260	
90	DIELDRIN				
93	4,4'-DDE				
94	4,4'-DDD				
98	ENDRIN				
96	ENDOSULFAN II (B)				
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE	↓			

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

date injected 12/1/83 14:04 std ID 12/1/83 11:36 COMMENTS:

Detection x 10 - 6%

Lab. Number: 8842-3V
Sample ID: F 5095 10UL
Date Injected: 11/16/83
# of Searches attached: _____
No peaks to search: L

VOLATILES

HIGH HAZARD

Marks Jund
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	151	128	31029	50
88	Vinyl chloride	____	62	____	____
50	Dichlorodifluoromethane	____	101	____	____
45	Methyl chloride	____	50	____	____
46	Methyl bromide	____	94	____	____
16	Chloroethane	____	64	____	____
44	Methylene chloride	____	84	____	____
2	Acrolein	____	56	____	____
3	Acrylonitrile	____	53	____	____
49	Trichlorofluoromethane	____	101	____	____
29	1,1-Dichloroethylene	____	96	____	____
13	1,1-Dichloroethane	____	63	____	____
30	1,2-trans-Dichloroethylene	____	96	____	____
23	Chloroform	____	83	____	____
994	D4-1,2-dichloroethane	193	102	19295	93
10	1,2-Dichloroethane	____	98	____	____
11	1,1,1-Trichloroethane	____	97	____	____
6	Carbon tetrachloride	____	117	____	____
48	Dichlorobromomethane	____	127	____	____

Lab number: _____
Sample ID: _____

Marks Grad
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	~~ug/L~~ or ug/g
967	1-Chloro-2-bromopropane (I.S.)	294	77	84742	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	118266	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	367	100	180134	95
86	Toluene	~~367~~	91	~~180134~~	~~95~~ psm
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	483	174	180134	95

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8842-P
SAMPLE ID: F-5095
CONC. FACTOR (WET WT): 19/10ml
CONC. FACTOR (DRY WT):

Kirk Pocan

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR UG/G (circled)	EPA NO.	COMPOUND	UG/L OR UG/G (circled)
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC	↓	106	PCB-1242	↓
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN		109	PCB-1232	
101	HEPTACHLOR EPOXIDE		110	PCB-1248	
95	ENDOSULFAN I (A)		111	PCB-1260	↓
90	DIELDRIN				
93	4,4'-DDE				
94	4,4'-DDD				
98	ENDRIN				
96	ENDOSULFAN II (B)				
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE	↓			

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

[signature]

Anthony D. D[illegible]

date injected 12/5/83 5:54 std ID 12/5/83 4:00 COMMENTS:

Detection x5 - 50%.

779F

Lab. Number: 8893-3V
Sample ID: F5096 10UL
Date Injected: 11/16/83
# of Searches attached:
No peaks to search: V

VOLATILES

HIGH HAZARD

Mark D. Ford
(signatures of persons reporting data)

Paul A. Taylor

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or (ug/g)
998	Bromochloromethane (I.S.)	151	128	31126	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	193	102	20108	97
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Lab number: _____
Sample ID: _____

Marks Jund
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/l or ug/g
967	1-Chloro-2-bromopropane (I.S.)	294	77	96630	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	116098	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	367	100	203461	109
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	483	174	~~207~~ 114514	113

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8843-P
SAMPLE ID: F5096
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT):

Kirk Doran
SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR (UG/G)	EPA NO.	COMPOUND	UG/L OR (UG/G)
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC		106	PCB-1242	
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN	ND	109	PCB-1232	
101	HEPTACHLOR EPOXIDE	0.15	110	PCB-1248	
95	ENDOSULFAN I (A)	ND	111	PCB-1260	
90	DIELDRIN	ND			
93	4,4'-DDE	ND			
94	4,4'-DDD	ND			
98	ENDRIN	0.23			
96	ENDOSULFAN II (B)	ND			
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE				

SURROGATE	peak height SAMPLE/SURROGATE	% RECOVERY
130 DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

J Svoboda
Anthony D Dong

date injected 11/29/83 21:34 std ID 11/30/83 14:50 COMMENTS:

Detection x 10 - 6% fractions
Detection x 50 - 15 x 50% fractions

779F

Lab. Number: 8849-3V
Sample ID: F5097 10UL
Date Injected: 11/16/82
# of Searches attached: _____
No peaks to search: —

VOLATILES HIGH HAZARD

Mark D. Grundl
(signatures of persons reporting data)

Paul A. Taylor

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	150	128	29422	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	192	102	19016	97
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Lab number: _____
Sample ID: _____

Marks Jund
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	~~ug/l or~~ ug/g
967	1-Chloro-2-bromopropane (I.S.)	292	77	77081	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	359	55	101027	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	365	100	174564	108
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	481	174	~~174564~~ 105663	~~108~~ 120

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8841-P
SAMPLE ID: F5097
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT): ______

[signature]
SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR (UG/G)	EPA NO.	COMPOUND	UG/L OR (UG/G)
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC	↓	106	PCB-1242	↓
103	B-BHC	↓	107	PCB-1254	↓
100	HEPTACHLOR	↓	112	PCB-1016	↓
104	D-BHC	↓	108	PCB-1221	↓
89	ALDRIN	ND	109	PCB-1232	↓
101	HEPTACHLOR EPOXIDE	0.38	110	PCB-1248	↓
95	ENDOSULFAN I (A)	ND	111	PCB-1260	
90	DIELDRIN	↓			
93	4,4'-DDE	↓			
94	4,4'-DDD	↓			
98	ENDRIN	↓			
96	ENDOSULFAN II (B)	↓			
92	4,4'-DDT	↓			
97	ENDOSULFAN SULFATE	↓			
99	ENDRIN ALDEHYDE	↓			
91	CHLORDANE				

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY: [signatures]

date injected 12/5/83 6:20   std ID 12/5/83 4:00   COMMENTS:

Detection x5 - 6%
Detection x50 - 15% + 50%
~~Hp Epoxide may not be real~~ cf

CASE # 779F

Lab. Number: 884503V
Sample ID: F5096.10ul
Date Injected: 11/16/83
# of Searches attached:
No peaks to search: ✓

VOLATILES

HIGH HAZARD

Robert L. Mitel
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	151	128	31017	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	193	102	18565	89
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Paul A. Taylor

CASE # 779F

Lab number: 084503V
Sample ID: F5098, 10ul

Robert S. Mitel
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
967	1-Chloro-2-bromopropane (I.S.)	294	77	83318	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	115042	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	367	100	176960	96
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	483	174	107316	107

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8845-P
SAMPLE ID: F5098
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT):

Kurt Pocar

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR (UG/G)
102	A-BHC	ND
105	G-BHC	
103	B-BHC	
100	HEPTACHLOR	
104	D-BHC	
89	ALDRIN	
101	HEPTACHLOR EPOXIDE	
95	ENDOSULFAN I (A)	
90	DIELDRIN	
93	4,4'-DDE	
94	4,4'-DDD	
98	ENDRIN	
96	ENDOSULFAN II (B)	
92	4,4'-DDT	
97	ENDOSULFAN SULFATE	
99	ENDRIN ALDEHYDE	
91	CHLORDANE	

EPA NO.	COMPOUND	UG/L OR (UG/G)
113	TOXAPHENE	ND
106	PCB-1242	
107	PCB-1254	
112	PCB-1016	
108	PCB-1221	
109	PCB-1232	
110	PCB-1248	
111	PCB-1260	

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

Anthony D. Wong

date injected 12/5/83 7:52 std ID 12/5/83 4:00 COMMENTS:

Detection x 5 - 6/ fraction
Detection x 50 - 15+50/ fraction

CASE # 779 F

Lab. Number: 884603V
Sample ID: FS099 10wf
Date Injected: 11/16/83
# of Searches attached:
No peaks to search: ✓

VOLATILES

HIGH HAZARD

Robert L. Mitel MEJ
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	150	128	32715	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	192	102	17619	86
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Paul A. Taylor

CASE #779F

Lab number: 884603V
Sample ID: F5099 10ml

Robert S. Mitzel
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or (ug/g)
967	1-Chloro-2-bromopropane (I.S.)	294	77	82168	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	107564	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	367	100	184548	109
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	482	174	141888	~~130~~ ~~120~~ BSM 128

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: EE46-F
SAMPLE ID: F5099
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT):

SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR (UG/G)	EPA NO.	COMPOUND	UG/L OR (UG/G)
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC		106	PCB-1242	
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN		109	PCB-1232	
101	HEPTACHLOR EPOXIDE		110	PCB-1248	
95	ENDOSULFAN I (A)		111	PCB-1260	
90	DIELDRIN				
93	4,4'-DDE				
94	4,4'-DDD				
98	ENDRIN				
96	ENDOSULFAN II (B)				
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE				

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

date injected 11/29/83 22:59 std ID 11/29/83 18:11 COMMENTS:

/—

CASE # 779F

Lab. Number: 0047036
Sample ID: F5100 1000
Date Injected: 11/16/83
# of Searches attached: ______
No peaks to search: ✓

VOLATILES

HIGH HAZARD

Robert S. Mitchel
(signatures of persons reporting data)

Paul A. Taylor

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	151	128	32882	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	193	102	19794	90
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

CASE # 7795

Lab number: 8847031
Sample ID: E5100 10ml

Robert S. Mitchell
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
967	1-Chloro-2-bromopropane (I.S.)	294	77	86268	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	111130	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	367	100	201827	110
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	482	174	126383	130

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 3847-P
SAMPLE ID: F5100
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT): ____

[signature]
SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR UG/G	EPA NO.	COMPOUND	UG/L OR UG/G
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC		106	PCB-1242	
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN		109	PCB-1232	
101	HEPTACHLOR EPOXIDE		110	PCB-1248	
95	ENDOSULFAN I (A)		111	PCB-1260	
90	DIELDRIN				
93	4,4'-DDE				
94	4,4'-DDD				
98	ENDRIN				
96	ENDOSULFAN II (B)				
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE				

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

[signature]

[signature]

date injected 11/29/83 23:27 std ID 11/29/83 18:11

COMMENTS:

Lab. Number: 8848-3V
Sample ID: F5913 10UL
Date Injected: 11/16/83
# of Searches attached:
No peaks to search: 1

VOLATILES

HIGH HAZARD

Mark D Fund

(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/l or ug/g
998	Bromochloromethane (I.S.)	150	128	34231	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	193	102	20738	96
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Paul A Taylor

Lab number: _____
Sample ID: _____

Mark D Jund
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
967	1-Chloro-2-bromopropane (I.S.)	293	77	97212	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	126127	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	366	100	211407	107
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	481	174	116528	90

CALIFORNIA ANALYTICAL LABORATORIES

PESTICIDES - EPA PROJECTS

LAB NO: 8848-P
SAMPLE ID: F5913
CONC. FACTOR (WET WT): 1g/10ml
CONC. FACTOR (DRY WT):

Kirk Pocan
SIGNATURES OF PERSONS REPORTING DATA

EPA NO.	COMPOUND	UG/L OR (UG/G)	EPA NO.	COMPOUND	UG/L OR (UG/G)
102	A-BHC	ND	113	TOXAPHENE	ND
105	G-BHC	↓	106	PCB-1242	↓
103	B-BHC		107	PCB-1254	
100	HEPTACHLOR		112	PCB-1016	
104	D-BHC		108	PCB-1221	
89	ALDRIN		109	PCB-1232	
101	HEPTACHLOR EPOXIDE		110	PCB-1248	
95	ENDOSULFAN I (A)		111	PCB-1260	↓
90	DIELDRIN				
93	4,4'-DDE				
94	4,4'-DDD				
98	ENDRIN				
96	ENDOSULFAN II (B)				
92	4,4'-DDT				
97	ENDOSULFAN SULFATE				
99	ENDRIN ALDEHYDE				
91	CHLORDANE	↓			

SURROGATE		peak height SAMPLE/SURROGATE	% RECOVERY
130	DIBUTYL-CHLORENDATE	—	—

DATA APPROVED BY:

[signature]

[signature]

date injected 11/29/83 23:54 std ID 11/29/83 18:11

COMMENTS:

5227

NEIC/REGULATED LABORATORY SUMMARY REPORT

ct No. Region

VI

on Location	Collection Date	Collection Time	Sample Description	KOH FUSION	TOTAL MERCURY (in duplicate)	VOLATILE ORGANIC	BASE/NEUTRAL, ACID TCDD	BASE/NEUTRAL, ACID TCDD (COMB)	PESTICIDE/PCB		PHASE NUMBER	
Pit	8/31/83	13:25	100% black fine grain paste.	X	X	X	X		X		02	
	8/31/83	13:25		X	X						02	
	8/31/83	13:25		X	X	X	X		X		02	
SPIKE	8/31/83	13:25				X	X		X		02	
e Pit Solids	8/31/83	13:36	97.9% brown fine grain paste; 2.1% light brown cloudy non viscous water miscible liquid.	X	X	X	X		X		02	
e Pit Liquids	8/31/83	13:31	94.8% light yellow clear non viscous water miscible liquid; 5.2% dark brown fine grain paste.	X	X	X	X		X		02	
from Separator	8/31/83	14:24	100% dark brown fine grain solid.	X	X	X	X		X		02	
ator	8/31/83	14:27	59.9% black opaque viscous non water miscible liquid; 40.1% light yellow clear non viscous water miscible liquid	X	X	X	X		X		03	
e Pit Liquids	8/31/83	13:31	see sample no. F5096 for description.	X	X	X	X		X		01	
ator	8/31/83	14:27	see sample no. F5098 for description.	X	X	X	X		X		01	
e Pit Solids	8/31/83	13:36	see sample no, F5095 for description.	X	X	X	X		X		01	
LANK				X	X	X	X		X			
LANK				X								

RED C. HART ASSOCIATES, INC.
EIC/Regulated-Laboratory
enver Federal Center, Bldg. 53, Box 25227
enver, Colorado 80225

NEIC/REGULATED LABORATORY SUMMARY REPORT

SMO Case No. 2009 | NEIC Project No. | Region VI

ample umber	Station Number	Tag Number	Station Location	Collection Date	Collection Time	Sample Description	KOH FUSION	TOTAL MERCURY (in duplicate)	VOLATILE ORGANIC	BASE/NEUTRAL, ACID
F5094	10	6-00185	Westwaste Pit	8/31/83	13:25	100% black fine grain paste.	X	X	X	X
F5094D	10	6-00185	DUPLICATE	8/31/83	13:25		X	X		
F5094S	10	6-00185	SPIKE	8/31/83	13:25		X	X	X	X
F5094R	10	6-00185	REPLICATE SPIKE	8/31/83	13:25				X	X
F5095	11	6-00187	East Waste Pit Solids	8/31/83	13:36	97.9% brown fine grain paste; 2.1% light brown cloudy non viscous water miscible liquid.	X	X	X	X
F5096	11	6-00186	East Waste Pit Liquids	8/31/83	13:31	94.8% light yellow clear non viscous water miscible liquid; 5.2% dark brown fine grain paste.	X	X	X	X
F5097	13	6-00207	Discharge from Separator	8/31/83	14:24	100% dark brown fine grain solid.	X	X		X
F5098	14	6-00208	Oil Separator	8/31/83	14:27	59.9% black opaque viscous non water miscible liquid; 40.1% light yellow clear non viscous water miscible liquid	X	X	X	X
F5099	11	6-00186	East Waste Pit Liquids	8/31/83	13:31	see sample no. F5096 for description.	X	X	X	X
F5100	14	6-00208	Oil Separator	8/31/83	14:27	see sample no. F5098 for description.	X	X	X	
F5913	11	6-00187	East Waste Pit Solids	8/31/83	13:36	see sample no, F5095 for description.	X	X	X	
F5912			REAGENT BLANK				X	X	X	
F5914			REAGENT BLANK				X			

U.S. ENVIRONMENTAL PROTECTION AGENCY — CLP Sample Management Office

HIGH HAZARD TRAFFIC REPORT

Sample Number: F 5100

FIELD SAMPLE RECORD

(1) **Case Number:** 2009

Sample Site Name/Code: Abandoned Refinery

NM 1228

(2) **Field Sample Description:**

- __ Drum
- X Aqueous Liquid
- __ Sludge
- __ Solid
- __ Oil
- __ Other

(3) **Ship To:**
Fred C. Hart Assoc.
Regulated Lab
Denver Fed. Center
Bldg 53
Denver, Co. 80225
Attn: Steve Kunen

(4) **Sampling Office:** Dallas

Sampling Personnel:
David Anderson
(name)
214-742-6601
(phone)

Sampling Date: 8-3-83
1427
(begin) (end)

(5) **Known or Suspected Hazards:**
Refinery Waste

(6) **Sample Location:**
Sta 14
oil separator

(7) **Preparations Requested:**
(check below)

Sample Volume: 8oz

- ✓ Organics
- ✓ Volatile Organics
- ✓ Base/Neutral, Acid, TCDD
- ✓ Pesticides, PCB

- ✓ Inorganics
- ✓ Total Metals
- ✓ Total Mercury
- ✓ Strong Acid Anions

(8) **Shipping Information:**
Federal Express
(name of carrier)
9-1-83
(date shipped)
287 053 012
(airbill number)

(9) **Special Handling Instructions:**
aqueous phase
organic phase F5098

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia Phone: 703/557-2490 FTS/557-2490

HIGH HAZARD TRAFFIC REPORT

Sample Number F 5099

FIELD SAMPLE RECORD

(1) Case Number: 2070

Sample Site Name/Code: Abandoned Refinery

NM 122 X

(2) Field Sample Description:

__ Drum
X Aqueous Liquid
__ Sludge
__ Solid
__ Oil
__ Other

(3) Ship To:
Fred C. Hart Assoc.
Regulated Lab.
Denver Fed. Center
Bldg. 53
Denver, Co 80225
Attn: Steve Kunen

(4) Sampling Office: ~~Dallas~~ Dallas

Sampling Personnel:
David Anderson
(name)
214-742-1601
(phone)

Sampling Date: 8-21-83
1331
(begin) (end)

(5) Known or Suspected Hazards:
Refinery Wastes

(6) Sample Location:
Sta 11 East
Waste Pit liquids

(7) Preparations Requested:
(check below)

Sample Volume: 8 oz

✓ Organics
✓ Volatile Organics
✓ Base/Neutral, Acid,
TCDD
__ Pesticides, PCB

__ Inorganics
✓ Total Metals
✓ Total Mercury
✓ Strong Acid Anions

(8) Shipping Information:
Federal Express
(name of carrier)
9-1-83
(date shipped)
287 053-012
(airbill number)

(9) Special Handling Instructions: aqueous phase
organic phase F 5096

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY — CLP Sample Management Office

HIGH HAZARD TRAFFIC REPORT

Sample Number F 5098

FIELD SAMPLE RECORD

① Case Number: 2009

Sample Site Name/Code: Abandoned Refinery

AM 1228

② Field Sample Description:

__ Drum
__ Aqueous Liquid
__ Sludge
__ Solid
X Oil
__ Other

③ Ship To:
Fred C Hart Associates
Denver Federal Center
Regulated Lab
Bldg 53
Denver, Co. 80225
Attn: Steve Kunen

④ Sampling Office: Dallas

Sampling Personnel:
David Anderson
(name)
214-742-10601
(phone)

Sampling Date: 8-31-83
1427
(begin) (end)

⑤ Known or Suspected Hazards:

Refinery Wastes

⑥ Sample Location:
Sk
14
Oil separator

⑦ Preparations Requested:
(check below)

Sample Volume: 80 ml

X Organics
X Volatile Organics
X Base/Neutral, Acid,
__ TCDD
X Pesticides, PCB

X Inorganics
X Total Metals
X Total Mercury
X Strong Acid Anions

⑧ Shipping Information:

Federal Express
(name of carrier)
9-1-83
~~8-31-83~~ DA
(date shipped)
287 053 012
(airbill number)

⑨ Special Handling Instructions:

2-phase analyze separately

Lot 631814

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY CLP Sample Management Office
P.O. Box 818 Alexandria, Virginia Phone: 703/557-2490 FTS/557-2490

Sample Number
F 5097

HIGH HAZARD TRAFFIC REPORT

FIELD SAMPLE RECORD

① **Case Number:** 2019

Sample Site Name/Code: Abandoned Refinery

NAA 1228

② **Field Sample Description:**

- __ Drum
- __ Aqueous Liquid
- X Sludge
- __ Solid
- __ Oil
- __ Other

③ **Ship To:**
Fred C. Hart Associates
Regulated Lab
Denver Federal Center
Bldg 53
Denver, Co. 80225
Attn: Steve Kugen

④ **Sampling Office:** Dallas

Sampling Personnel: David Anderson
(name)
214 - 742-6601
(phone)

Sampling Date: 8-31-83
1424
(begin) (end)

⑤ **Known or Suspected Hazards:**
refinery waste

⑥ **Sample Location:**
Stn 13
discharge from
Separator

⑦ **Preparations Requested:**
(check below)
Sample Volume: 8oz

- ✓ Organics
- ✓ Volatile Organics
- ✓ Base/Neutral, Acid, TCDD
- ✓ Pesticides, PCB

- __ Inorganics
- ✓ Total Metals
- ✓ Total Mercury
- ✓ Strong Acid Anions

⑧ **Shipping Information:**
Federal Express
(name of carrier)
9-1-83
~~8-31-83~~ 9a
(date shipped)
287-053-012
(airbill number)

⑨ **Special Handling Instructions:**
Lot 631 814

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 (703) 557-2490 FTS 557-2490

Sample Number
F 5096

HIGH HAZARD TRAFFIC REPORT

FIELD SAMPLE RECORD

① **Case Number:** 2009

Sample Site Name/Code: Aberdeen Refinery

NM 1228

② **Field Sample Description:**

- __ Drum
- __ Aqueous Liquid
- __ Sludge
- __ Solid
- X Oil
- __ Other

③ **Ship To:**
Fred C Hart Associates
Regional Lab.
Denver Federal Center
Bldg 53
Denver, Co 80225
Attn: Steve Kunen

④ **Sampling Office:** Dallas

Sampling Personnel:
David Anderson
(name)
214-742-6601
(phone)

Sampling Date: 8-31-83
1331
(begin) (end)

⑤ **Known or Suspected Hazards:**
Refinery Wide

⑥ **Sample Location:**
Sta 11 East
Waste Pit liquid.

⑦ **Preparations Requested:**
(check below)

Sample Volume: 502

- __ Organics
- ✓ Volatile Organics
- ✓ Base/Neutral, Acid,
- __ TCDD
- ✓ Pesticides, PCB

- __ Inorganics
- ✓ Total Metals
- ✓ Total Mercury
- ✓ Strong Acid Anions

⑧ **Shipping Information:**
Federal Express
(name of carrier)
~~8-31-83~~ 9-1-83
(date shipped)
287 053 012
(airbill number)

⑨ **Special Handling Instructions:**
two phase, analyze separately if possible

Lot 631814

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 Phone: 703/557-2490 FTS/557-2490

Sample Number F 5095

HIGH HAZARD TRAFFIC REPORT

FIELD SAMPLE RECORD

① Case Number: 2009

Sample Site Name/Code: Abandoned Refinery

NMA 1228

② Field Sample Description:

__ Drum
__ Aqueous Liquid
X Sludge
__ Solid
X Oil
__ Other

③ Ship To:
Fred C Hart Associates
Regulated Lab
Denver Federal Center
Bldg 53
Denver, Co. 80225
Attn: Steve Kunen

④ Sampling Office: Dallas

Sampling Personnel:
David Anderson
(name)
214-742-1601
(phone)

Sampling Date: 8-31-83
~~742~~ DA 1336
(begin) (end)

⑤ Known or Suspected Hazards:
Refinery waste

⑥ Sample Location:
Sta 11
East waste pit
solids!

⑦ Preparations Requested:
(check below)

Sample Volume: 807

✓ Organics
✓ Volatile Organics
✓ Base/Neutral, Acid,
✓ TCDD
__ Pesticides, PCB

✓ Inorganics
✓ Total Metals
__ Total Mercury
✓ Strong Acid Anions

⑧ Shipping Information:
Federal Express
(name of carrier)
~~8-31-83~~ DA 9-1-83
(date shipped)
287 053 012
(airbill number)

⑨ Special Handling Instructions:
~~Two phase analyses separately if possible~~ DA

Lot - 631814

Client File Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY / CLP Sample Management Office

HIGH HAZARD TRAFFIC REPORT

Sample Number F 5094

FIELD SAMPLE RECORD

① Case Number: 2009

Sample Site Name/Code: Aberdeen Refinery

NM 1228

② Field Sample Description:

- __ Drum
- __ Aqueous Liquid
- __ Sludge
- __ Solid
- __ Oil
- X Other Sediment

③ Ship To:

Fred C. Hart Associates
Regional Lab.
Denver Federal Center
Bldg 53
Denver, Co. 80225
Attn: Steve Kuhen

④ Sampling Office: Dallas

Sampling Personnel:

David Anderson
(name)

214-742-6601
(phone)

Sampling Date: 8/31/83

1325
(begin) (end)

⑤ Known or Suspected Hazards: Refinery wastes

⑥ Sample Location:

10
West Waste Pit

⑦ Preparations Requested:
(check below)

Sample Volume: 802

- ✓ Organics
- ✓ Volatile Organics
- ✓ Base/Neutral, Acid, TCDD
- ✓ Pesticides, PCB
- ✓ Inorganics
- ✓ Total Metals
- ✓ Total Mercury
- ✓ Strong Acid Anions

⑧ Shipping Information:

Federal Express
(name of carrier)

~~8-31-83~~ 9-1-83
(date shipped)

287053012
(airbill number)

⑨ Special Handling Instructions:

Mix before Extracting

Lot # 631814

Client File Copy

CALIFORNIA ANALYTICAL LABORATORIES, INC.

Lab Number 8839
Sample I.D. F5094

Std. I.D. H44110
Date Injected 11-10-83

Conc. Factor 1/40
.025g/1 ml

EPA ORANGE PROJECT

Signatures of Persons Reporting Data

LN	EPA No.	COMPOUND NAME	RRT	SCAN NO.	ION TO QUANT.	AREA	QUAN LIST	µg/g
1 *	960	PHENOL-D_3	1.00	493	97	25947	40	
2	61	N-NITROSODIMETHYLAMINE	0.440		74			
3	982	2-FLUOROPHENOL s @ 15	0.830	344	112	6206	10	
4	985	2-FLUOROANILINE			111			
5	983	PHENOL-D_5 s @ 2.5	.998	492	99	1286	2	
6	65	PHENOL	1.00		94			
7	984	PENTAFLUOROPHENOL			184			
8	18	BIS(2-CHLOROETHYL)ETHER	1.007		93			
9	24	2-CHLOROPHENOL	1.011		128			
10	26	1,3-DICHLOROBENZENE	1.042		146			
11	27	1,4-DICHLOROBENZENE	1.058		146			
12	25	1,2-DICHLOROBENZENE	1.103		146			
13	42	BIS(2-CHLOROISOPROPYL)ETHER	1.144		121			
14	12	HEXACHLOROETHANE	1.179		117			
15 *	987	NAPHTHALENE-D_8	1.00	698	136	60879	40	
16	63	N-NITROSODI-N-PROPYLAMINE	0.855		130			
17	988	NITROBENZENE-D_5 s @ 15	0.872	599	128	3104	9	
18	56	NITROBENZENE	0.875		123			
19	54	ISOPHORONE	0.920		82			

Lab No. 8839
Sample I.D. F5094

Signatures of Persons Reporting Data

LN	EPA No.	COMPOUND	RRT	SCAN NO.	ION TO QUANT.	AREA	QUAN LIST	ug/g
20	57	2-NITROPHENOL	0.935		139			
21	34	2,4-DIMETHYLPHENOL	0.953		122			
22	43	BIS(2-CHLOROETHOXY)METHANE	0.970		93			
23	31	2,4-DICHLOROPHENOL	0.982		162			
24	974	DECAFLUOROBIPHENYL A @ 2.5	0.917	642	265	474	2	
25	8	1,2,4-TRICHLOROBENZENE	0.993		180			
26	55	NAPHTHALENE	1.004		128			
27	52	HEXACHLOROBUTADIENE	1.042		225			
28	22	PARACHLOROMETACRESOL	1.127		142			
29	53	HEXACHLOROCYCLOPENTADIENE	1.183		237			
30	21	2,4,6-TRICHLOROPHENOL	1.201		196			
31	976	2-FLUOROBIPHENYL	1.217		172			
32	20	2-CHLORONAPHTHALENE	1.230		162			
33	77	ACENAPHTHYLENE	1.309		152			
34	71	DIMETHYL PHTHALATE	1.308		163			
35	36	2,6-DINITROTOLUENE	1.320		165			
36	* 992	ANTHRACENE-D_{10}	1.00	1173	188	38305	40	
37	1	ACENAPHTHENE	0.822		154			
38	59	2,4-DINITROPHENOL	0.834		184			
39	35	2,4-DINITROTOLUENE	0.851		89			
40	58	4-NITROPHENOL	0.854		109			
41	80	FLUORENE	0.882		166			
42	40	4-CHLOROPHENYLPHENYL ETHER	0.885		204			
43	70	DIETHYL PHTHALATE	0.887		149			

Lab No. 8839

Sample I.D. F5094

Signatures of Persons Reporting Data

LN	EPA No.	COMPOUND	RRT	SCAN NO.	ION TO QUANT.	AREA	QUAN LIST	µg/g
44	60	4,6-DINITRO-O-CRESOL	0.900		198			
45	62	DIPHENYLAMINE	0.901		169			
46	37	AZOBENZENE			77			
47	41	4-BROMOPHENYL PHENYL ETHER	0.943		248			
48	9	HEXACHLOROBENZENE	0.958		284			
49	64	PENTACHLOROPHENOL	0.982		266			
50	81	PHENANTHRENE	0.997	1176	178	1975	2	80
51	78	ANTHRACENE	1.002		178			
52	68	DI-N-BUTYL PHTHALATE	1.081		149			
53	39	FLUORANTHENE	1.142		202			
54	963	PYRENE-D_{10} s @ 2.5	1.167	1380	212	2508	2	
55	84	PYRENE	1.169	1383	202	3063	3	120
56	* 961	CHRYSENE-D_{12}	1.000	1564	240	20293	40	
57	5	BENZIDINE	0.886		184			
58	67	BUTYL BENZYL PHTHALATE	0.955		149			
59	72	BENZO(A)ANTHRACENE	0.998		228			
60	76	CHRYSENE	1.003		228			
61	28	3,3'-DICHLOROBENZIDINE	1.002		252			
62	66	BIS(2-ETHYLHEXYL)PHTHALATE	1.019		149			
63	69	DI-N-OCTYL PHTHALATE	1.104		149			
64	* 959	BENZO(A)PYRENE-D_{12}	1.000	1782	264	16510	40	
65	74	3,4-BENZOFLUORANTHENE AND/OR			252			
	75	BENZO(K)FLUORANTHENE						
66	73	BENZO(A)PYRENE	1.004		252			
67	83	INDENO(1,2,3-CD)PYRENE			276			
68	82	DIBENZO(A,H)ANTHRACENE	1.259		278			
69	79	BENZO(GHI)PERYLENE	1.317		276			

779F

Lab. Number: 8839-3V
Sample ID: F5099 10UL
Date Injected: 11/16/83
# of Searches attached: _____
No peaks to search: L

VOLATILES

HIGH HAZARD

Marks Jund

(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or ug/g
998	Bromochloromethane (I.S.)	152	128	34065	50
88	Vinyl chloride		62		
50	Dichlorodifluoromethane		101		
45	Methyl chloride		50		
46	Methyl bromide		94		
16	Chloroethane		64		
44	Methylene chloride		84		
2	Acrolein		56		
3	Acrylonitrile		53		
49	Trichlorofluoromethane		101		
29	1,1-Dichloroethylene		96		
13	1,1-Dichloroethane		63		
30	1,2-trans-Dichloroethylene		96		
23	Chloroform		83		
994	D4-1,2-dichloroethane	193	102	24629	108
10	1,2-Dichloroethane		98		
11	1,1,1-Trichloroethane		97		
6	Carbon tetrachloride		117		
48	Dichlorobromomethane		127		

Paula Taylor

OLATILES PAGE 2

Lab number:_____
Sample ID:_____

Mark D Jund
(signatures of persons reporting data)

EPA NO.	COMPOUND NAME	SCAN NO.	ION TO QUANT.	AREA	ug/L or (ug/g)
967	1-Chloro-2-bromopropane (I.S.)	294	77	111762	50
32	1,2-Dichloropropane		112		
33	Cis & trans-1,3-dichloropropylene		75		
4	Benzene		78		
87	Trichloroethylene		130		
51	Chlorodibromomethane		127		
19	2-Chloroethylvinyl ether		106		
14	1,1,2-Trichloroethane		97		
47	Bromoform		173		
999	1,4-Dichlorobutane (I.S.)	355	55	132284	50
85	Tetrachloroethylene		164		
15	1,1,2,2-Tetrachloroethane		83		
971	D8-Toluene	366	100	238679	112
86	Toluene		91		
7	Chlorobenzene		112		
38	Ethylbenzene		106		
956	Bromofluorobenzene	482	174	123115	107

8210-31

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

REGION	SITE NUMBER (To be assigned by HQ)
6	NM 1228

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
Abandoned Refinery (AKA Prewitt Tar Pits)	Old U.S. 66 ½ mile west of Prewitt Post Office.		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Prewitt	NM	87045	McKinley

G. SITE OPERATOR INFORMATION

1. NAME	2. TELEPHONE NUMBER		
None, Inactive. (see attachment A for previous operators)			
3. STREET	**4. CITY**	**5. STATE**	**6. ZIP CODE**

H. REALTY OWNER INFORMATION (if different from operator of site)

1. NAME	2. TELEPHONE NUMBER	
Navajo Tribe of Indian		
3. CITY	**4. STATE**	**5. ZIP CODE**
Prewitt	NM	87045

I. SITE DESCRIPTION

See attachment A

J. TYPE OF OWNERSHIP

☒ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)	B. APPARENT SERIOUSNESS OF PROBLEM
	☒ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
David Anderson David Anderson	214-742-4521	Jan 21, 1983

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE	
David Anderson	FIT Chemist	
3. ORGANIZATION		**4. TELEPHONE NO. (area code & no.)**
Ecology and Environment, Inc. 1509 Main St. Dallas, TX 75201		214-742-4521

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
James Trusley	Ecology and Environment, Inc.	214-742-4521
Timothy Reed	Environmentalist (505) 287-8845 NMEID 708 Uranium Av Milan, N.M. 87020	505-287-8845

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
T.C. Lassen	Environmental Engineer 213-267-5454	The Atchison, Topeka, and Santa Fe Railway Co. One Santa Fe Plaza 5200 E. Sheila St. Los Angeles, CA 90040

PRELIMINARY REPORT This does not constitute final opinion of EPA.

PRELIMINARY REPORT ... Institute ... U.S. EPA

REVIEWED BY (GREEN) DATE 2-14-83

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
See I.G, attachment A for listing of former site operators			

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
none			

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS
none		

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
12-15-82	0900 - 1200	[X] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)
Clear, Calm, 25-30°F

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)	X	No samples taken during this inspection	

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
None		

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [X] a. GROUND [ ] b. AERIAL
2. PHOTOS IN CUSTODY OF: EPA Region 6 (See attachments)

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS: See attached maps

E. COORDINATES

1. LATITUDE (deg.-min.-sec.): 32°21'35" N
2. LONGITUDE (deg.-min.-sec.): 108°01'55" W

V. SITE INFORMATION

A. SITE STATUS

[ ] 1. ACTIVE (These industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.)
[X] 2. INACTIVE (These sites which no longer receive wastes.)
[ ] 3. OTHER (specify): _____ (These sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE? N/A

[ ] 1. NO [ ] 2. YES (specify generator's four-digit SIC Code): _____

C. AREA OF SITE (in acres)

65

D. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
[ ] 1. RAIL	[ ] 1. PILE	[ ] 1. FILTRATION	[ ] 1. LANDFILL
[ ] 2. SHIP	[X] 2. SURFACE IMPOUNDMENT	[ ] 2. INCINERATION	[ ] 2. LANDFARM
[ ] 3. BARGE	[ ] 3. DRUMS	[ ] 3. VOLUME REDUCTION	[ ] 3. OPEN DUMP
[ ] 4. TRUCK	[ ] 4. TANK, ABOVE GROUND	[ ] 4. RECYCLING/RECOVERY	[X] 4. SURFACE IMPOUNDMENT
[ ] 5. PIPELINE	[ ] 5. TANK, BELOW GROUND	[ ] 5. CHEM./PHYS./TREATMENT	[ ] 5. MIDNIGHT DUMPING
[ ] 6. OTHER (specify):	[ ] 6. OTHER (specify):	[ ] 6. BIOLOGICAL TREATMENT	[ ] 6. INCINERATION
		[ ] 7. WASTE OIL REPROCESSING	[ ] 7. UNDERGROUND INJECTION
		[ ] 8. SOLVENT RECOVERY	[ ] 8. OTHER (specify):
		[ ] 9. OTHER (specify):	

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for...

[ ] 1. STORAGE [ ] 2. INCINERATION [ ] 3. LANDFILL [X] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL
[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. LIQUID [ ] 2. SOLID [X] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [X] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE
[X] 5. TOXIC [ ] 6. REACTIVE [ ] 7. INERT [X] 8. FLAMMABLE
[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

No

Continued From Front

VII. WASTE RELATED INFORMATION (continued)

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: None	AMOUNT: None
UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:
(1) PAINT, PIGMENTS	X (1) OILY WASTES *	(1) HALOGENATED SOLVENTS	(1) ACIDS	(1) FLYASH	(1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	X (2) NON-HALOGNTD. SOLVENTS *	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE	*Waste material from the refinery operation		(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
X (5) OTHER (specify): Asphalt or heavy tars.			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			X (10) METALS Lead possible		
			(11) OTHER (specify):		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X') a. SOLID	b. LIQ.	c. VAPOR	3. TOXICITY (mark 'X') a. HIGH	b. MED.	c. LOW	d. NONE	4. CAS NUMBER	5. AMOUNT	6. UNIT
Benzene		X							Unknown	
Toluene		X							Unknown	

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

X A. HUMAN HEALTH HAZARDS

See VIII D

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☒ D. CONTAMINATION OF WATER SUPPLY

Analysis of a water sample collected on 12-14-82 by the state from the Mabon Barnes well showed 185 ppb benzene and 6 ppm toluene (see attachments for results). This well is 175' deep. Other residences adjacent to the Barnes residence are also being sampled by the state.

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

The Barnes well is in the second aquifer in the area. Mr. Barnes told the state that the drinking water well at the refinery had to be abandoned because of gasoline in the water. This well was apparently in the first, or uppermost aquifer.

☐ G. CONTAMINATION OF SURFACE WATER

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☒ D. CONTAMINATION OF WATER SUPPLY

Analysis of a water sample collected on 12-14-82 by the state from the Mabon Barnes well showed 185 ppb benzene and 6 ppm toluene (see attachments for results). This well is 175' deep. Other residences adjacent to the Barnes residence are also being sampled by the state.

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☒ F. CONTAMINATION OF GROUND WATER

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☐ G. CONTAMINATION OF SURFACE WATER

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

X N. FIRE OR EXPLOSION

The waste material in the fenced pit has been ignited several times, according to State authorities.

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

☒ U. OTHER (specify):

Water from what appears to be an API separator drains into the ground (photo 10). Sampling should be conducted at the site. Surface samples should be collected from the waste pit, stained soil areas, the separator and its discharge, and from the area in which the tank was located that now shows an absence of vegetation. The tar spots along the siding should also be sampled. Borings and monitor wells should be installed to determine the condition of both aquifers in the area. Placement of the wells should be based on the results of a resistivity survey of the area.

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	150	150	35	1 mile
2. IN COMMERCIAL OR INDUSTRIAL AREAS	0	0	0	1 mile
3. IN PUBLICLY TRAVELLED AREAS	5000	5000	0	1 mile
4. PUBLIC USE AREAS (parks, schools, etc.)	100	100	1	1 mile

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
175 ft. *	NE	residential
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
25-100 gal/min	less than ¼ mile	wells to N, NW and NE

G. TYPE OF DRINKING WATER SUPPLY

☒ 1. NON-COMMUNITY < 15 CONNECTIONS ☐ 2. COMMUNITY (specify town): > 15 CONNECTIONS

☐ 3. SURFACE WATER ☒ 4. WELL

Continue On Page 9

*Based on Barnes well depth, 2nd aquifer. Depth of 1st aquifer is unknown.

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
01	175 ft.	Malbon Barnes Residence	X	
02	Unknown	Navajo Tribe well onsite	X	
		other residences east of Barnes home	X	

I. RECEIVING WATER

1. NAME: Rio San Jose from Mitchell Draw

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

J. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

Coldwater fishery, fish culture, irrigation, Livestock and wildlife watering, secondary contact recreation.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☒ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

X	A. OVERBURDEN	*X*	B. BEDROCK (specify below)	*X*	C. OTHER (specify below)
X	1. SAND	X	Wingate Sandstone	X	Chinle Formation, Shale & sandstone
X	2. CLAY				
X	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☒ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE	2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.
5%	To NE, sparse vegetation, sand mounds

J. OTHER GEOLOGICAL DATA

Surface Geology or Overburden: Sandy alluvium with subordinate amounts of fine gravel silt, & clay. Deposits form belts of smooth sandy ground commonly slope 5% or less and consist of sand mounds approximately 1 ft. high over caliche.
Vegetation & Land Use: Surface lands are primarily used for grazing. The predominant vegetation are the grasses grama/galleta steepe, and area basin Sagebush(see attachment A)

Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X') 1. YES	2. NO	3. UNKNOWN
None							

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

[X] NONE [ ] YES (summarize in this space)

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT

Earthen

2. STABILITY/CONDITION OF EMBANKMENTS

Good

3. EVIDENCE OF SITE INSTABILITY (Erosion, Settling, Sink Holes, etc.)

☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE

☒ YES ☐ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT

☐ YES ☐ NO Unknown

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT

☐ YES ☐ NO No records

7. IMPOUNDMENT HAS LINER SYSTEM

☐ YES ☒ NO

7a. INTEGRITY OF LINER SYSTEM CHECKED

☐ YES ☐ NO N/A

7b. FINDINGS

N/A

8. SOIL STRUCTURE AND SUBSTRUCTURE

Sandy clay & gravel See XIII. J.

9. MONITORING WELLS

☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH

LENGTH 50' WIDTH 50' DEPTH unknwon

11. CALCULATED VOLUMETRIC CAPACITY

Unknown

12. PERCENT OF CAPACITY REMAINING

10%

13. ESTIMATE FREEBOARD

less than 6 inches

14. SOLIDS DEPOSITION

☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD

none

16. OTHER EQUIPMENT

ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-3.

Corresponding number on form	Additional Remark and/or Explanation
I.G.	Previous Site Owners - Operators: Oct, 1941: Petroleum Products Refining Co. leased property from R.C. Prewitt. Lease 6-253. Jan, 1944: Petroleum Products Refining and Producing Co. (successor to Petroleum Products Refining Co) purchased, 75.000 acres from R.C. Prewitt, Refinery area and Railroad siding (Tracts A&B). Deed 12-447. Dec, 1946: 10 acres of tne refinery tract deeded to Roy H. McKay. Quit claim Deed 4-286. May, 1952: Malco Refineries purchased the property from Petroleum Products Refining and Producing Co. Warranty deed 10-620. May, 1955: New Mexico Asphalt and Refining Co. purchased the property from Malco Refineries. Warranty deed 12-431 Malco purchased New Mexico Asphalt and Refining Co. and renamed it Malco Asphalt and Refining Co. Jan, 1956: El Paso Natural Gas Products Co. purchased the property from Malco Asphalt and Refining Co. Deed 14-753. Dec, 1966: The Navajo Tribe of Indians purchased the property from El Paso Products Co. (successor to El Paso Natural Gas Products Co.). Warranty Deed 17-83
I.i.	The site consists of two areas. Tract A, contains the refinery proper, south of Hwy 66, 68.216 acres. Tract B, contains a railroad siding, north of Hwy 66 and south of the ATSF right of way 6.784 acres. Tract A contains one waste pit that has been fenced (photo 8), one depressed area with stained soil that is not fenced(photo 9), an old oil water separator (photo 10) and other rubble and tank bases from equipment that has been removed. There are numerous diversion and containment dikes on the site.

ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-3.

Corresponding number on form	Additional Remark and/or Explanation
I.i. cont'.	On Tract B, there appears to be two major areas of spillage of tar like material, one on each end of the property, along with numerous small spots of the tar like waste along what appears to be the path of the old siding. (photos 1-2, 5-7). Manifold pipes and what was probably the pump lift station are also visible(photo 3,4).
XIII.J.	Heavy uranium mining in the Ambrosia Lake District is within 20 miles to the Northeast. Subsurface Geology: Windgate Sandstone Chinle Formation Underlying the Alluvial Fan deposits is the UTr Windgate Sandstone member of the Glen Canyon Group. It is a red to tan medium grain sandstone about 75 ft. thick at this locale and thins to the east. The UTr Chinle Formation underlies the Windgate sandstone. The Chinle is dominantly red shale with interbedded sandstone or mottled sandstone units. Structure: The Laramide orogeny gave rise to much of the regional deformation including the Zuni Uplift, Chaco Slope and the San Juan Basin. The site lies on the Chaco Slope. Principal folds and faults were formed then as well and have a gentle northerly dip. Receiving Waters: Mitchell Draw - ephemerol stream. Surficially has no direct connection with Bluewater Lake - wrong side of ridge. Surface flow would follow draw tributaries north-NE. Groundwater flow would be the same, hence the houses are down dip. Site is located in the Northwest corner of the Middle Rio Grande Basin. The Mitchell Draw eventually runs into Rio San Jose.

RESIDENTIAL WELL SAMPLING INFORMATION

1. Name, address and phone number of resident (include county and zip code)

   Bacca Council, Navajo Tribe

   Prewitt, New Mexico 87045

   McKinley

2. Date well was dug Unknown

3. Depth of well Unknown, probably approximately 175 ft.

4. Depth to static water Unknown

5. Is the well cased? Yes X No

   If so, to what depth? Unknown

   What type of casing is used? PVC

6. Is well screened? Yes No Unknown

7. How much is the well pumped? (Only for residential use or for use in watering livestock?) residential and livestock

8. Any other pertinent information?

RESIDENTIAL WELL SAMPLING INFORMATION

1. Name, address and phone number of resident (include county and zip code)

   Mabon Barnes

   Prewitt, New Mexico 87045

   McKinley

2. Date well was dug approximately 1960

3. Depth of well 175 ft.

4. Depth to static water Unknown

5. Is the well cased? Yes_____ No_____ Unknown

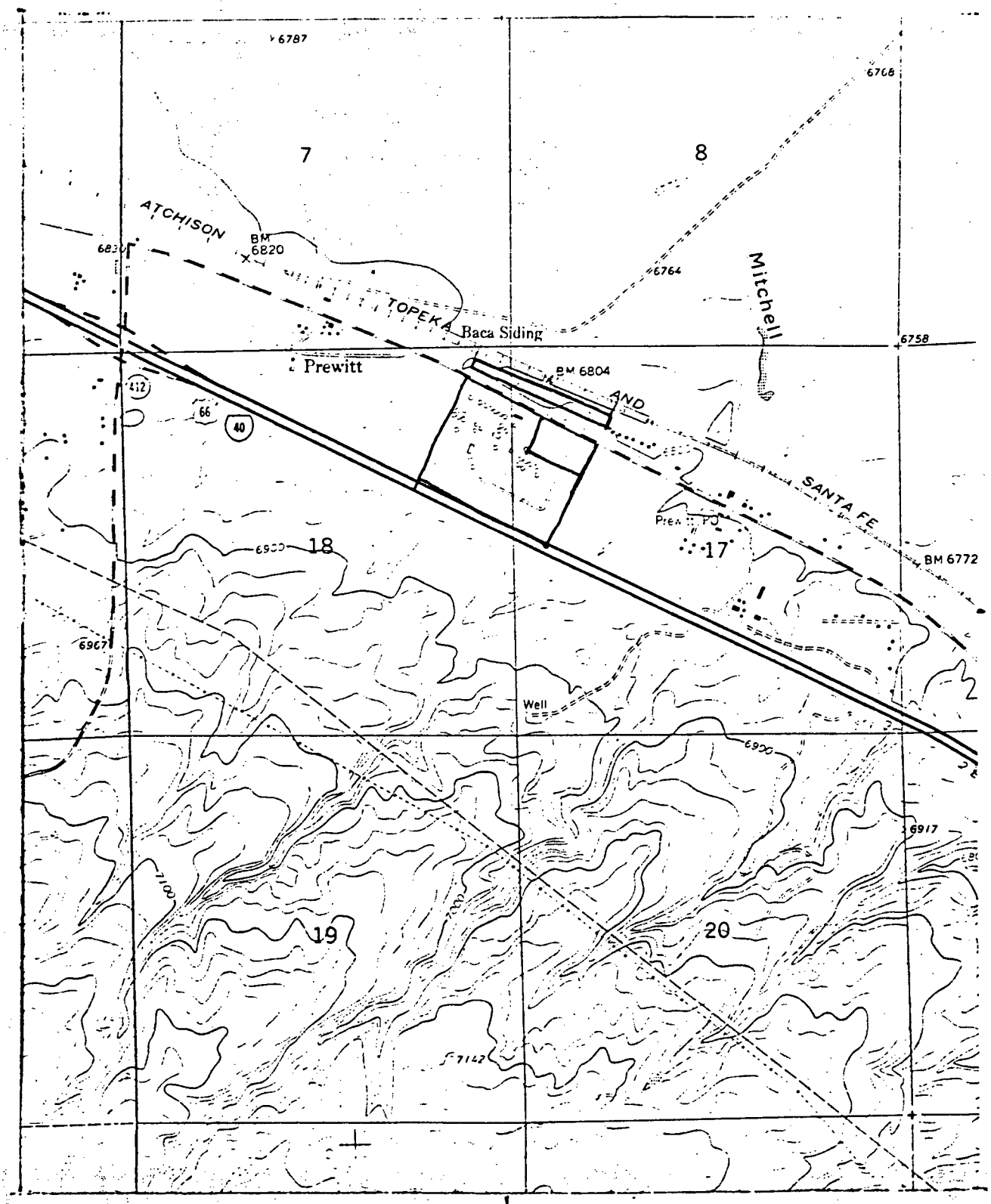
   If so, to what depth? Unknown

   What type of casing is used? Unknown

6. Is well screened? Yes_____ No_____ Unknown

7. How much is the well pumped? (Only for residential use or for use in watering livestock?) residential use only

8. Any other pertinent information? State of New Mexico sampled this well and found 185 ppb benzene. The state has recommend that use of the well be discontinued. Other near by wells are being sampled by the state.



Abandoned Refinery
Prewitt Tar Pits
Prewitt, New Mexico

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPL

82- 0386-C

Date received	Lab No.	SLD use code no.
12/13/82	LRC-386-A	52 c 1

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Poi

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☐ 1 ☐ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS: ☐ Complete Secondary ☒ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
Maben Barnes Private Well		Prewitt, N.M.	McKinley	☐ TREATED WATER ☒ RAW WTR

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
10-14-82	10:15 am	Outside tap Barnes Residence	Collected for determination at Health Risk - at request of Steve Pierce, Water Quality Section	Tim Reed
Collected By	**Owner**			**Address** EID Box 2586 Milan, N.M. 87021
Tim Reed	Maben Barnes			

TYPE of SYSTEM (Check one): ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☒ Well-Depth 175 ft. ☐ Drain ☐ Stream ☐ Pool ☐ Other (specify)

LAT. ° ' "
LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filterable Residue	mg/l	01000 Arsenic				39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Las)		01005 Barium				39732 Lindane	
00900 Tot. Hardness (as $CaCO_3$)		00620 Nitrate (as N)		00095 Conductance Micromhos 25°C		01025 Cadmium				38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as $CaCO_3$)		00400 pH		01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO_3)		01330 Odor		01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)		00445 Carbonate (as CO_3)		00080 Color	mg/l	07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
01056 Manganese (as Mn)		00945 Sulfate (as SO_4)		00070 Turbidity		01145 Selenium		11501 Radium-228	pCi/l	X Petroleum gas/oil	*
						01075 Silver					

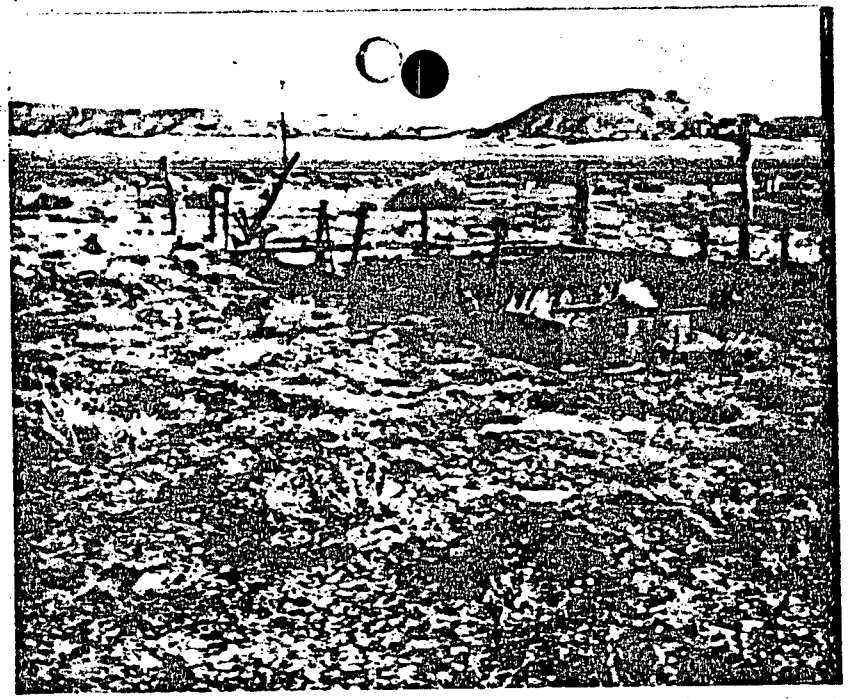
RECEIVED JAN 3 ENVIRONMENTAL IMPROVEMENT AGENCY

LABORATORY REMARKS: * Sample Contains: 185 µg/l (PPB) Benzene and 6 µg/l (PPB) Toluene
The above compounds are common ingredients in gasoline and are the more water soluble ingredients.

Reviewed by: L Meyerhoff
Date reported: 12/27/82

D 702 Form Revised 4/78

DISTRIBUTION: White - Water Supply Regulation, SF • Canary - WS System • Pink - EIA Regional Office • Goldenrod - SLD Lab



Photographer / Witness

David Anderson / James Trusley

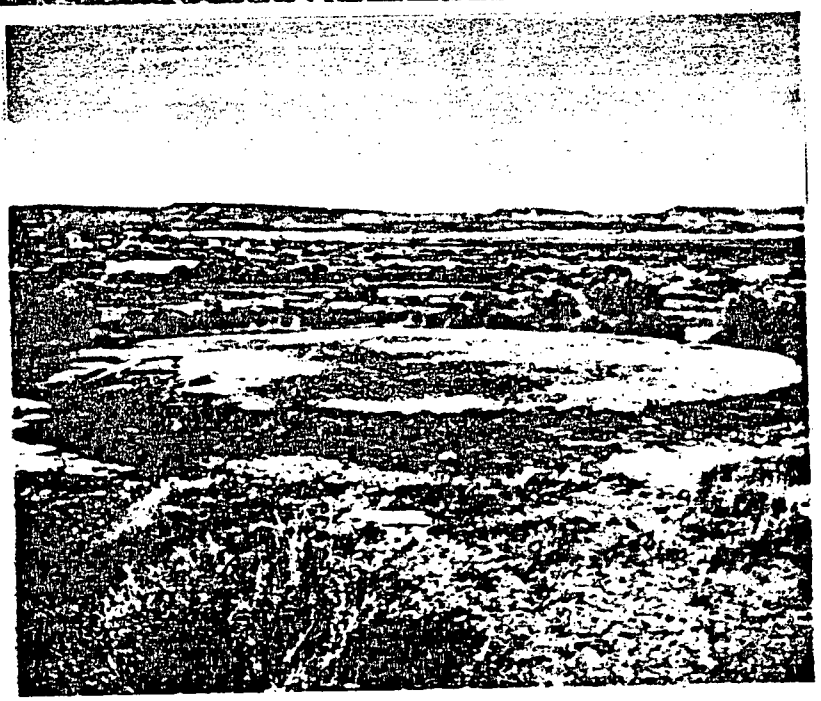
Date / Time / Direction

12-15-82 / 1135 / NE

Comments: photo 10

oil-water separator

discharge noted by arrow



Photographer / Witness

David Anderson / James Trusley

Date / Time / Direction

12-15-82 / 1144 / NW

Comments: photo # 11

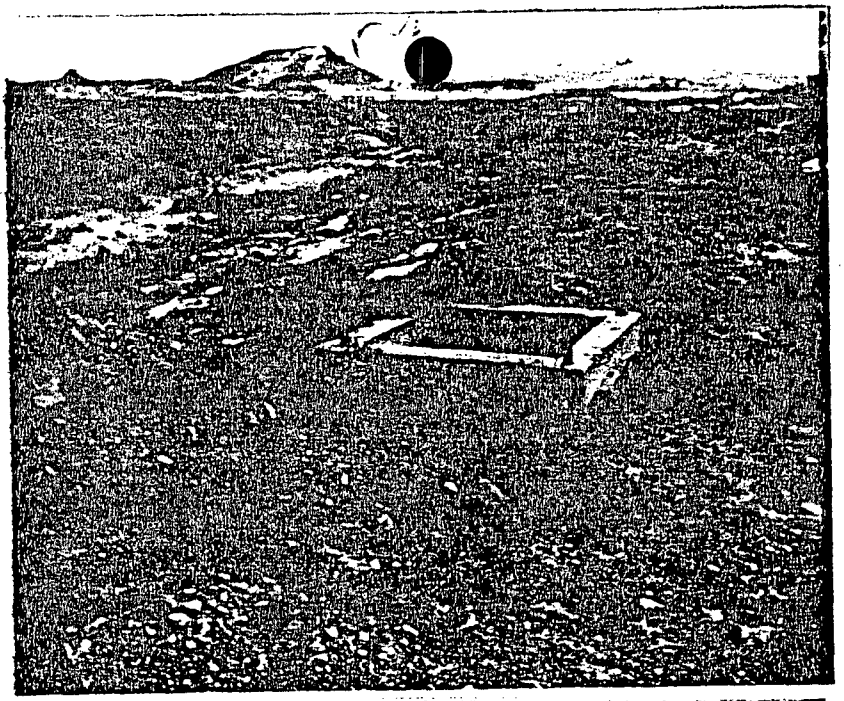
Site of tank that leaked

note lack of vegetation

Photographer / Witness

Date / Time / Direction

Comments:



Photographer / Witness

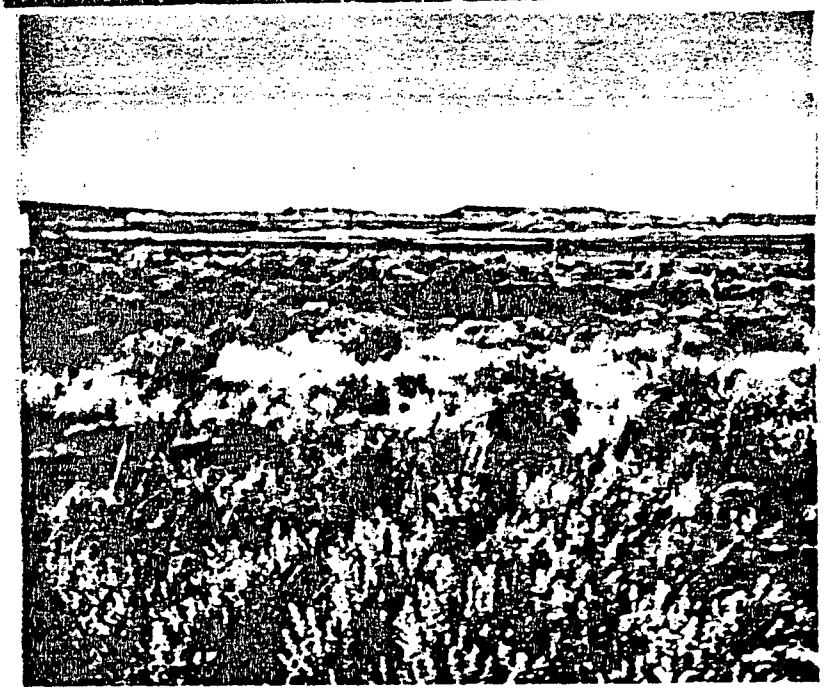
David Anderson / James Trusley

Date / Time / Direction

12-15-82 / 1038 / E

Comments: photo 4

pump lift station



Photographer / Witness

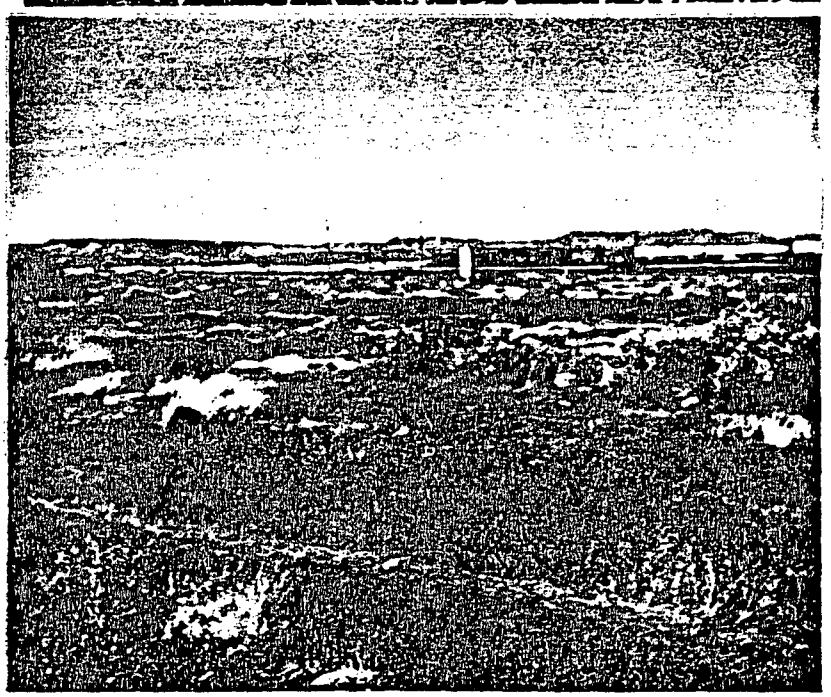
David Anderson / James Trusley

Date / Time / Direction

12-15-82 / 1124 / NW

Comments: photo #8

fenced waste pit



Photographer / Witness

David Anderson / James Trusley

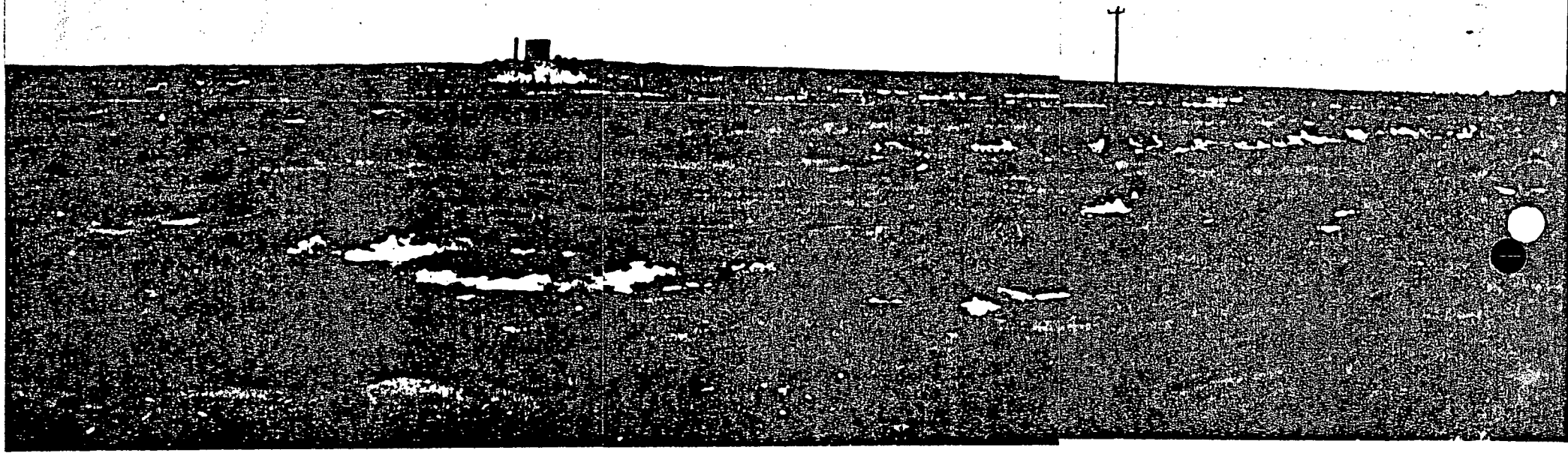
Date / Time / Direction

12-15-82 / 1126 / NW

Comments: photo #9

stained soil area

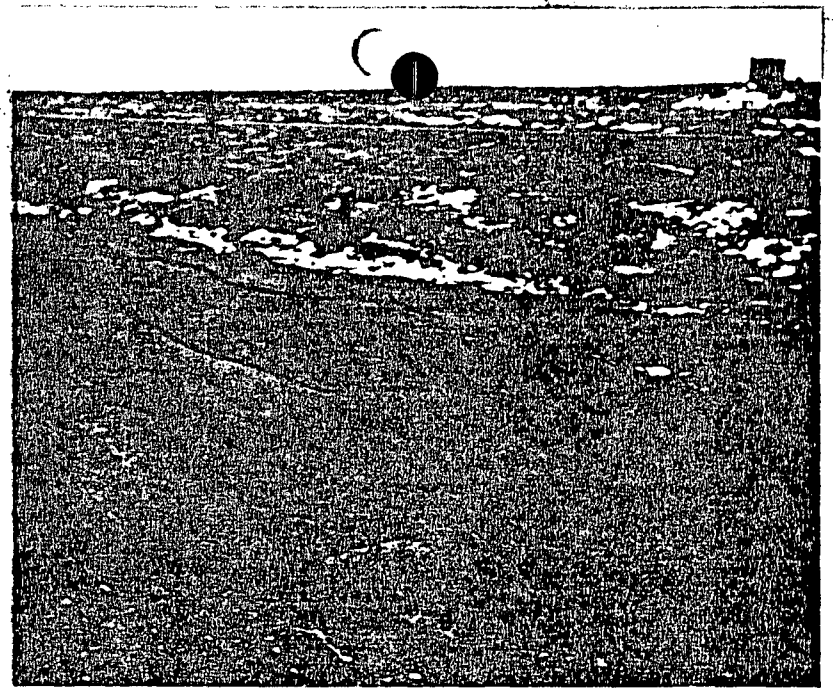
Bacca well in background



Photographer / Witness
David Anderson / James Trusley

Date / Time / Direction
12-15-82 / 1041 / S

Comments:
photos 5-7
eastern end of Tract B
covered waste area
refinery (Tract A) in background



Photographer / Witness

David Anderson / James Trusley

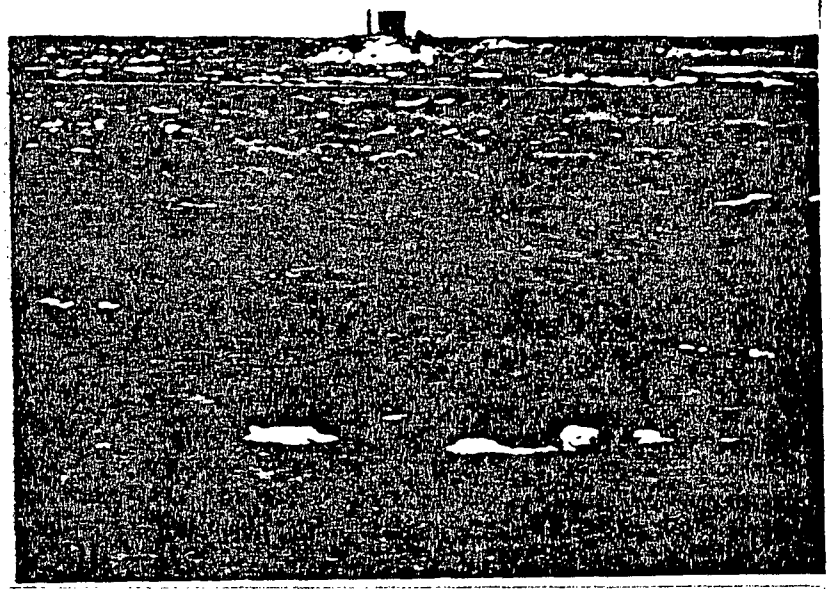
Date / Time / Direction

12-15-82 / 1026 / SE

Comments: photo # 1

west end of Tract B

circle encloses waste



Photographer / Witness

David Anderson / James Trusley

Date / Time / Direction

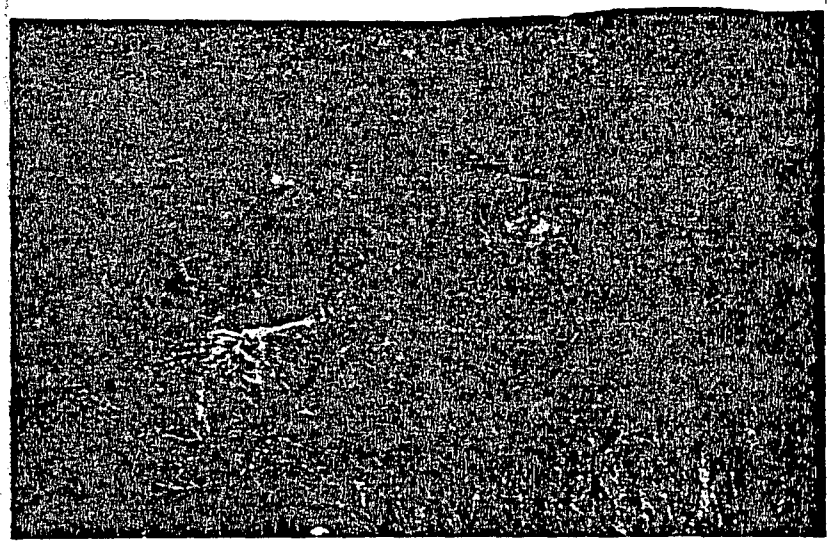
12-15-82 / 1032 / S

Comments: photo 2

examples of spots along

the siding x 50 ft

apart



Photographer / Witness

David Anderson / James Trusley

Date / Time / Direction

12-15-82 / 1035 / N1

Comments: photo # 3

manifold pipe

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

12-15-82
(Date)

RECEIPT FOR ~~SAMPLES~~ Records

NAME AND TITLE OF EPA REPRESENTATIVE: David Anderson
FIT
David Anderson
(Signature)

SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	TYPE	VOLUME	SPLIT SAMPLE REQUESTED	SPLIT SAMPLE PROVIDED
Station map		221 - 11443		Sheet 27		
Right of way map		220 11973		Sheet 27		

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

T.C. Lassen Environmental Engineer ATSF RR
One Santa Fe Plaza 5200 E Sheila St. Los Angeles, Co. 90040

T Lassen
(Signature)

12/15/82
(Date)

DISTRIBUTION: One copy facility representative
One copy for inspector's records
Original to Regional Office

EPA Notificati~n of Hazardous Wastr Site SE

United States Environmental Protection Agency Washington

NMS-000-001-024 000343

RECEIVED

JUN 10 1981

6AEP

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

Permit # NM00281

A Person Required to Notify:
Enter the name and address of the person or organization required to notify.

Name: El Paso Products Company
Street: P.O. Box 3986, American Bank Building
City: Odessa State: Texas Zip Code: 79760

B Site Location: NMD98-062-2723
Enter the common name (if known) and actual location of the site.

Name of Site: Old Prewitt Refinery
Street: U.S. Highway 66 (just east of Prewitt on South Side of Highway 66)
City: Prewitt County: McKinley State: N.M. Zip Code: 87045

C Person to Contact:
Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Hughes, Michael P., Director, Env. Reg. Affairs
Phone: 915/333-7400

D Dates of Waste Handling:
Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): unknown To (Year): est. 1957 - shutdown
Purchased from Malco on Jan. 10, 1956

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☒ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☒ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☒ Other (Specify) Crude Refinery (4,000 BBL/Day)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

SE

EPA Notification of Hazardous Waste Site

NMS·000·001·027 000504

United States Environmental Protection Agency Washington DC 20460

RECEIVED

JUN 9 1981

CAEP

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Petroleum Products Refining and Producing Company

Street: c/o Jack V. McGlothlin, P. O. Box 5198

City: Abilene State: TX Zip Code: 79608

B Site Location: NMD98-062-2749

Enter the common name (if known) and actual location of the site.

Name of Site: Petroleum Product's Refinery

Street: UNKNOWN

City: PRewitt County: McKinley State: NM Zip Code: 87045

HAZ - NM00281

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Watrous, Ronald E., Attorney

Phone: 915/698-8800

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1938 To (Year): 1949

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste: Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

_____

_____

_____

Source of Waste: Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

_____

_____

_____

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

K049		
K051		
K052		

Form Approved OMB No. 2060-0138

Notification of Hazardous Waste Site — Side Two

F Waste Quantity

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☒ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet: unknown

gallons: _____

Total Facility Area

square feet: unknown

acres: _____

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessi g hazardous waste sites. Although completing the items is not required, you are encouraged to do so

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

Closed petroleum refinery. Likely that wastewater treatment pond sludges and leaded tank bottoms were disposed of at site but no specific knowledge. No street address but only refinery ever located in town. Refinery closed in 1949.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other"

Name: Petroleum Products Refining & Producing Company

Street: c/o Jack V. McGlothlin, P. O. Box 5198

City: Abilene State: TX Zip Code: 79608

Signature: Donald E. Watson Date: 6/9/81

☐ Owner, Present
☒ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

[FR Doc. 81-11500 Filed 4-14-81; 8:45 am]

BILLING CODE 6560-29-C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 14 FEB 1983

SUBJECT: Potential Hazardous Waste Site

RECEIVED
FEB 15 1983
6AEG

FROM: Dave Peters, Chief
Hazardous Waste Section (6ES-SH)

TO: Sam Nott, Chief
Enforcement Section (6AW-SE)

Site Name Prewitt Tar Pit
Location Prewitt, N.M.
Hazsit No. NM 1328
TDD No. R6-8216-31A

A. Field Report:

T2070-2	attached (X)	
T2070-3 recon sampling	attached (X)	
ISS Compliance Report	attached ( )	
ISS Notification Requirement Form	attached ( )	

B. §311 potential (completed by 6ES-E):

1. §311 sample collected	yes ( )	no (X)
2. Analytical results attached	yes ( )	no ( )

3. Proposed §311 action: _____

C. Were drinking water wells sampled? yes ( ) no (X)

D. Analytical Data:

1. FIT data review	attached ( )	
2. Contract lab results:		
water	attached ( )	
soil, waste	attached ( )	
3. Houston Lab results	attached ( )	

E. Comments: Results of well sampled by State included - phase - 185 ppb benzene. Sampling recommended.

cc: Mollie Mitchell (SW-S)

PRELIMINARY REPORT
This does not constitute
final opinion of EPA.

8210-31

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by Hq)
6	NM 1228

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Abandoned Refinery (AKA Prewitt Tar Pits)

B. STREET *(or other identifier)*: Old U.S. 66, ½ mile west of Prewitt Post Office

C. CITY: Prewitt

D. STATE: N.M.

E. ZIP CODE: 87045

F. COUNTY NAME: McKinley

G. OWNER/OPERATOR *(if known)*

1. NAME: Navajo Indian Tribe
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP

[X] 1. FEDERAL [ ] 2. STATE [ ] 3. COUNTY [ ] 4. MUNICIPAL [ ] 5. PRIVATE [ ] 6. UNKNOWN

I. SITE DESCRIPTION

The site is an abandoned refinery and railroad siding. Waste is contained in a pit and in stained soil areas.

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*: Unknown

K. DATE IDENTIFIED *(mo., day, & yr.)*:

L. PRINCIPAL STATE CONTACT

1. NAME: Timothy Reed NMEID P.O. Box 2536 Milan N.M. 87020
2. TELEPHONE NUMBER: 505-287-8845

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

[X] 1. HIGH [ ] 2. MEDIUM [ ] 3. LOW [ ] 4. NONE [ ] 5. UNKNOWN

B. RECOMMENDATION

[ ] 1. NO ACTION NEEDED *(no hazard)*

[ ] 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

[X] 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

[ ] 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME: David Anderson (David Anderson)
2. TELEPHONE NUMBER: 214-742-4521
3. DATE *(mo., day, & yr.)*: Jan 20, 1983

III. SITE INFORMATION

A. SITE STATUS

[ ] 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.)*

[X] 2. INACTIVE *(Those sites which no longer receive wastes.)*

[ ] 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

PRELIMINARY REPORT
This does not constitute
final opinion of EPA

B. IS GENERATOR ON SITE? N/A

[ ] 1. NO [ ] 2. YES *(specify generator's four-digit SIC Code)*:

C. AREA OF SITE *(in acres)*: 65

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE *(deg.—min.—sec.)*: 35°21'35" N
2. LONGITUDE *(deg.—min.—sec.)*: 108°01'55" W

E. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES *(specify)*:

RETRIEVED BY (GRESH) DATE

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
	1. PILE	1. FILTRATION	1. LANDFILL
	X 2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
	3. DRUMS	3. VOLUME REDUCTION	3. OPEN DUMP
	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	X 4. SURFACE IMPOUNDMENT
	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify):
		9. OTHER (specify):	

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

The site has been inactive for 15-20 years. Site water well was closed because of contamination with gasoline while the refinery was in operation. This well obtain water from the upper aquifer.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☐ 3. SOLID ☒ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☒ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☒ 9. FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

No

2. Estimate the amount(specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: Unknown	AMOUNT: None	AMOUNT: None
UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE:
☐ (1) PAINT, PIGMENTS	X (1) OILY WASTES *	☐ (1) HALOGENATED SOLVENTS	☐ (1) ACIDS	☐ (1) FLYASH	X (1) LABORATORY PHARMACEUT.
☐ (2) METALS SLUDGES	X (2) OTHER (specify):	X (2) NON-HALOGNTD. SOLVENTS *	☐ (2) PICKLING LIQUORS	☐ (2) ASBESTOS	☐ (2) HOSPITAL
☐ (3) POTW		☐ (3) OTHER (specify):	☐ (3) CAUSTICS	☐ (3) MILLING/ MINE TAILINGS	☐ (3) RADIOACTIVE
☐ (4) ALUMINUM SLUDGE	*Waste materia from refinery operation		☐ (4) PESTICIDES	☐ (4) FERROUS SMLTG. WASTES	☐ (4) MUNICIPAL
X (5) OTHER (specify):			☐ (5) DYES/INKS	☐ (5) NON-FERROUS SMLTG. WASTES	☐ (5) OTHER (specify):
Asphalt or tar			☐ (6) CYANIDE	☐ (6) OTHER (specify):	
			☐ (7) PHENOLS		
			☐ (8) HALOGENS		
			☐ (9) PCB		
			X (10) METALS Lead possible		
			☐ (11) OTHER (specify)		

Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Benzene
Toluene

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			Sec. VI.5.
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY	X		12-14-82	Analysis of Barnes well shows 185 ppb benzene
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER	X		12-14-82	See VI. 5
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA	X		12-14-82	area of no vegetation from leaky gasoline tank
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	X		12-14-82	Numerous areas of stained soil
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION	X	X		Pit with waste has been ignited several times in the past.
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

None

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify): _____

B. IN COMPLIANCE? N/A

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

NM0/228

Helen

DEC 6 1982

Mr. Tim Lassen
ATSF Railway Co.
5200 E. Shelia Street
Los Angeles, CA 90040

Re: Request to Inspect Prewitt Tar Pits in Prewitt, NM

Dear Mr. Lassen:

This is to inform you that Ecology and Environment, Inc. (EEI), is a duly authorized consultant for the U.S. Environmental Protection Agency (EPA). Representatives from EEI may, upon presentation of a Letter of Introduction, enter any facility where hazardous materials are generated, stored, treated, disposed of, or transported to determine compliance with standards, regulations and permits issued pursuant to the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Specifically, this inspection is to determine if an "imminent and substantial endangerment to health of the environment" exists as described by Section 7003 of RCRA or Section 106 of CERCLA. Please be aware this inspection will not include a determination of compliance with RCRA Interim Status Standards. Authority to conduct this inspection is contained in Section 3007 of RCRA and Section 104 of CERCLA.

An inspection may include a review of records, taking photographs, and collecting samples. Representatives of EEI are authorized to collect information which is considered confidential. Any such information must be specified as confidential at the time of the inspection so that appropriate protective measures may be taken.

Mr. K. Malone, EEI, Field Inspection Team Leader, or a member of his staff, will contact you to arrange an inspection.

A copy of the inspection report and any analytical data for your facility may be obtained by writing to Sam Nott (6AW-SE), EPA Region 6, 1201 Elm Street, Dallas, Texas 75270.

6ES-SH:KSOLARI:kfh:x9770:12/6/82

If you have any questions concerning this matter, please contact me at (214) 767-9783 or Karen Solari of my staff at 767-9770.

Sincerely,
Original signed by
Dave Peters

Dave Peters
Deputy Project Officer (6ES-SH)

cc: Mr. Raymond Sisneros (NMEID)

bcc: Sam Nott (6AW-SE)
K. Malone (FITL)

NM1228

MAR 4 1983

Mr. Charles Nylander
New Mexico Environmental
Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87503

Dear Mr. Nylander:

This letter is in reference to a February 23, 1983 telephone conversation between Dave Boyer of your staff and Larry Wright of my staff. That conversation concerned the Prewitt Refinery site located near Prewitt, New Mexico.

Mr. Boyer asked about the eligibility of this site for listing on the National Priority List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As noted during the conversation between Mr. Boyer and Mr. Wright, Section 101(14) and Section 104(a)(2) of CERCLA exclude petroleum, including crude oil and any fraction thereof, from response under the Act. It is our understanding that the groundwater contamination at the site results primarily from gasoline from past site operations, although benzene has been detected in the groundwater at high levels. If the contamination results from gasoline only, this could severely impact the ranking of the site. Until we have more complete details about the site, however, we are unable to make the determination concerning the petroleum exclusion.

In order for the site to be listed on the NPL, it must be ranked using the Hazard Ranking System (HRS), as detailed in the July 16, 1982 Federal Register as an attachment to the National Oil and Hazardous Substances Contingency Plan. Please compile and submit all the data and information (technical and legal) available about the site and we will evaluate it and use it to rank the site using the HRS. Mr. Dwight Hoenig (214-767-9712, FTS 729-9712) is in charge of the section that does the ranking and your staff may contact him directly with questions concerning the ranking system.

I am enclosing, with this letter, a copy of a report on the site which was recently received in our office. The report is based on a December 15, 1982 inspection of the site by Ecology and Environment, Inc. The site was inspected as a result of its listing in our HAZSIT system.

If you have any other questions related to this matter, please feel free to call me at (214) 767-9709 or FTS 729-9709.

Sincerely yours,

for William Rhea

William B. Hathaway, Deputy Director
Air & Waste Managment Division

Enclosure

bcc: NM 1228
Hoenig, 6AW-SO

EPA

POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: VI | SITE NUMBER (to be assigned by Hq): NM 01228

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Prewitt Tar Pits

B. STREET (or other identifier): N/I Interstate 40 - 9 miles west of Grants

C. CITY: Prewitt

D. STATE: NM

E. ZIP CODE: 87045

F. COUNTY NAME: Cibola

G. OWNER/OPERATOR (if known)

1. NAME: AT+SF RR.

2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

Low area in the AT+SF RR right-of-way

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)

Citizen's complaint

K. DATE IDENTIFIED (mo., day, & yr.): 12/3/80

L. PRINCIPAL STATE CONTACT

1. NAME: Jack Ellvinger

2. TELEPHONE NUMBER: 505/827-5271/275

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY: NMEID

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: Jack Ellvinger

2. TELEPHONE NUMBER: 505/827-5271/275

3. DATE (mo., day, & yr.): 9/1/81

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☒ 2. INACTIVE (Those sites which no longer receive wastes.) ?

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☒ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres): ~ 2 acres

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.):

2. LONGITUDE (deg.-min.-sec.):

E. ARE THERE BUILDINGS ON THE SITE?

☒ 1. NO ☐ 2. YES (specify):

PRELIMINARY REPORT
This does not constitute final opinion of EPA.

REVIEWED BY (6AEGH) DO DATE 12/17/81

T2070-2 (10-77)

Continue On Reverse

Continued From Front

CHARACTERIZATION OF SITE ACTI

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X' A. TRANSPORTER	'X' B. STORER	'X' C. TREATER	'X' D. DISPOSER
			X
1. RAIL	1. PILE	1. FILTRATION	1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	3. DRUMS	3. VOLUME REDUCTION	X 3. OPEN DUMP
4. TRUCK	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify):
		9. OTHER (specify):	

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. UNKNOWN [ ] 2. LIQUID [ ] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[X] 1. UNKNOWN [ ] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4. RADIOACTIVE [ ] 5. HIGHLY VOLATILE
[ ] 6. TOXIC [ ] 7. REACTIVE [ ] 8. INERT [ ] 9. FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT UNK	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGENTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
X (5) OTHER (specify): Thick, heavy unknown Material			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

Continued From Page 2

WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard)

Substances unknown

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark "X")	C. ALLEGED INCIDENT (mark "X")	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			Physical dangers to small children - Material may be toxic additionally
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA	X			
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY	X			
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING	X			
22. OTHER (specify)				

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify): None known

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☒ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

EPA	POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION	REGION	SITE NUMBER
		VI	NM 01228

NOTE: The initial identification of a potential site or incident should not be interpreted as a finding of illegal activity or confirmation that an actual health or environmental threat exists. All identified sites will be assessed under the EPA's Hazardous Waste Site Enforcement and Response System to determine if a hazardous waste problem actually exists.

A. SITE NAME	B. STREET (or other identifier)		
Prewitt Tar Pits	Highway 40 - 19 Miles west of Grants		
C. CITY	D. STATE	E. ZIP CODE	F. COUNTY NAME
Prewitt	NM.	87045	Cibola

G. OWNER/OPERATOR (if known)

1. NAME	2. TELEPHONE NUMBER
AT+SF RR.	

H. TYPE OF OWNERSHIP (if known)

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

A low area along the RR right-of-way filled with a heavy black tar-like substance.

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)	K. DATE IDENTIFIED (mo., day, & yr.)
Citizen's Complaint	12/3/80

L. SUMMARY OF POTENTIAL OR KNOWN PROBLEM

Complaint said pets and livestock were getting stuck in this unknown substance.

M. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Jack Ellman	505/827-5271, 272	9/1/81

EPA Form 2070-8 (5-80)

SEP 08 1981

6AEG

San Phy

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
VI	NMO0281

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System: Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Prewitt Refinery	12 miles W. of Grants on old Hwy.	
C. CITY	**D. STATE**	**E. ZIP CODE**
Prewitt	NM.	

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X		X		
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

At the present time several Navajo families use an existing well at the Prewitt Refinery as a watering station. The SIA indicates the possibility of contamination of the aquifer with gasoline. NMEID will take samples at this site.

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*
6/30/81	

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Jack Ellinger	505/827/5271 ext 275	5/28/81

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

Take samples to confirm the presence of contaminates in the aquifer.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION (mo, day, & yr)	3. TO BE PERFORMED BY (EPA, Contractor, State, etc.)	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				PRELIMINARY REPORT This does not constitute final opinion of EPA.
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1) Organics	6/1/81	NMEID		

REVIEWED BY (GAEGH) Martha McKee 6/1/81 DATE

Continued From Front

III. INVESTIGATIVE ACTIVITY NEEDED and PART B - PROPOSED INVESTIGATIVE ACTIVITY (Continued)

d. TYPE OF LAB ANALYSIS (1)				
(2)				
e. OTHER (specify) (1)				
(2)				

C. ELABORATE ON ANY OF THE INFORMATION PROVIDED IN PART B (on front & above) AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER (specify)	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY (On Site & Off-Site): List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY (On Site & Off-Site): List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER (specify)		

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

VI | NM00281

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Prewitt Refinery

B. STREET (or other identifier): 12 miles (W) of Prewitt on old Hwy

C. CITY: Prewitt

D. STATE: NM

E. ZIP CODE:

F. COUNTY NAME: McKinley

G. SITE OPERATOR INFORMATION

1. NAME: Site Abandoned
2. TELEPHONE NUMBER:
3. STREET:
4. CITY:
5. STATE:
6. ZIP CODE:

H. REALTY OWNER INFORMATION (if different from operator of site)

1. NAME: Navajo Tribe
2. TELEPHONE NUMBER:
3. CITY:
4. STATE:
5. ZIP CODE:

I. SITE DESCRIPTION: An abandoned oil refinery

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.): 5/28/81

B. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☒ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME: Jack Ellvinger
2. TELEPHONE NUMBER: 505-827-5271-275
3. DATE (mo., day, & yr.): 5-26-81

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: Jack Ellvinger
2. TITLE: Environmental Scientist
3. ORGANIZATION: NMEID - Hazardous Waste
4. TELEPHONE NO. (area code & no.): 505/827/5271/275

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Walt Youngblood	NMEID - Solid Waste	505/827/5271/282

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
(NA)		

PRELIMINARY REPORT
~~This does not constitute~~
final opinion of EPA

REVIEWED BY (6AEGH) M McKee DATE 4/1/82

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources …)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
*Malco Oil Co - Owned Refinery till 1956			
*El Paso Products - Owned Refinery till 1966 - Odessa, Tx.			
* Either or both of the above could be linked to the alleged problem			

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo, day, yr)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
5/13/81	10:30 AM.	[X] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)

Clear & Warm

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER		None taken at the time of inspection	
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
	None taken	

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [X] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF: Jack Ellington

D. SITE MAPPED?

[ ] YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

[ ] 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[X] 2. INACTIVE (Those sites which no longer receive wastes).

[ ] 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred).

B. IS GENERATOR ON SITE?

[ ] 1. NO [X] 2. YES (specify generator's four-digit SIC Code): 2911

C. AREA OF SITE (in acres)

~25 acres

D. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

	A. TRANSPORTER		B. STORER		C. TREATER		D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY	X	8. OTHER (specify): Possible contamination via well boreholes
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

[ ] 1. STORAGE [ ] 2. INCINERATION [ ] 3. LANDFILL (NA) [ ] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. LIQUID [ ] 2. SOLID [ ] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [ ] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[X] 5. TOXIC [ ] 6. REACTIVE [ ] 7. INERT [ ] 8. FLAMMABLE

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, invoices, etc. below.

Continued From Front

WASTE RELATED INFORMATION (continu

2. Estimate the amount (specify unit of m... e) of waste by category; mark 'X' to indi... which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT UNK	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	X (2) OTHER(specify): Possibly Gasoline + Tetraethyl Lead	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER(specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER(specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER(specify):
			(6) CYANIDE	(6) OTHER(specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER(specify)		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X') a. SOLID	b. LIQ.	c. VAPOR	3. TOXICITY (mark 'X') a. HIGH	b. MED.	c. LOW	d. NONE	4. CAS NUMBER	5. AMOUNT	6. UNIT
(1) Gasoline		X		X					UNK	
(2) Tetraethyl Lead		X		X					UNK	
A possibility exists that these substances might be in the										
aquifer.										

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

X A. HUMAN HEALTH HAZARDS

Several families use the well at this location

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

NA

☐ I. FISH KILL

NA

☐ J. CONTAMINATION OF AIR

NA

☐ K. NOTICEABLE ODORS

NA

☒ L. CONTAMINATION OF SOIL

Soil in the area shows evidence of spilled oils, tars possibly tank bottoms - API Pit still there with a mixture of oil and water in it.

☐ M. PROPERTY DAMAGE

NA

☐ B. NON-WORKER INJURY/EXPOSURE

NA

☐ C. WORKER INJURY/EXPOSURE

NA

☒ D. CONTAMINATION OF WATER SUPPLY

SEE A

☐ E. CONTAMINATION OF FOOD CHAIN

NA

☒ F. CONTAMINATION OF GROUND WATER

SEE A

☐ G. CONTAMINATION OF SURFACE WATER

NA

NA

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

NA

☐ P. SEWER, STORM DRAIN PROBLEMS

NA

☐ Q. EROSION PROBLEMS

NA

☒ R. INADEQUATE SECURITY

No security at this site what-so-ever.

☐ S. INCOMPATIBLE WASTES

NA

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

NA

☐ U. OTHER (specify):

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	-0-	-0-	-0-	2 Miles
2. IN COMMERCIAL OR INDUSTRIAL AREAS	-0-	-0-	-0-	3/4 Miles
3. IN PUBLICLY TRAVELLED AREAS	-0-	-0-	-0-	1/2 Miles
4. PUBLIC USE AREAS (parks, schools, etc.)	-50-	-50-	-0-	USE the Site

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
~ 120 Ft.	SW	Household + Potable
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
UNK.	On Site	On Site

G. TYPE OF DRINKING WATER SUPPLY

☒ 1. NON-COMMUNITY < 15 CONNECTIONS ☐ 2. COMMUNITY (specify town): > 15 CONNECTIONS

☐ 3. SURFACE WATER ☒ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
Pvt. Well	~ 150/+	ON the Old Pol. site - 1/2 mile West	X	
"	"	of Hilton on old highway		

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☒ 5. OTHER (specify): Aquifer

J. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

Household + Irrigation.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☒ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

	A. OVERBURDEN	B. BEDROCK (specify below)	C. OTHER (specify below)
X	1. SAND		
X	2. CLAY		
X	3. GRAVEL		

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☒ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☑ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE	2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.
~2%	S/W

J. OTHER GEOLOGICAL DATA

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN
None							

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☒ NONE ☐ YES (summarize in this space)

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: VI

SITE NUMBER (To be assigned by HQ): NM0002901

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Prewitt Refining

B. STREET (or other identifier): South of Gallup on I-40

C. CITY: Gallup

D. STATE: NM

E. ZIP CODE: 87311

F. COUNTY NAME: McKinley

G. OWNER/OPERATOR (If known)

1. NAME: Unknown - Presently abandoned

2. TELEPHONE NUMBER: Unknown

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☒ 6. UNKNOWN

I. SITE DESCRIPTION

Abandoned Refinery

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)

EPA

K. DATE IDENTIFIED (mo., day, & yr.): 3/80

L. PRINCIPAL STATE CONTACT

1. NAME: Jack Ellvinger

2. TELEPHONE NUMBER: (505) 827-5271 Ext. 275

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☒ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: Jack Ellvinger

2. TELEPHONE NUMBER: (505) 82705271 Ext. 275

3. DATE (mo., day, & yr.): 5/19/80

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code): 2911

C. AREA OF SITE (In acres): Unknown

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE (deg.—min.—sec.):
2. LONGITUDE (deg.—min.—sec.):

E. ARE THERE BUILDINGS ON THE SITE?

☒ 1. NO ☐ 2. YES (specify): _____

PRELIMINARY REPORT
This does not constitute final opinion of EPA.

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

	A. TRANSPORTER		B. STORER		C. TREATER		D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING	X	7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☐ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☒ 9. FLAMMABLE
☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Unknown

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT Unknown	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	X (2) OTHER (specify): gasoline or other Petroleum Products	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify):		

Continue On Page 3

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): None
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify):

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☒ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number):

VIII. PAST REGULATORY ACTIONS

☐ A. NONE ☐ B. YES (summarize below)

Unknown

IX. INSPECTION ACTIVITY (past or on-going)

☐ A. NONE ☐ B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
None			

X. REMEDIAL ACTIVITY (past or on-going)

☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
None			

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard)

Unknown

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

It is possible that intentional injection of petroleum products took place while this site was in operation.

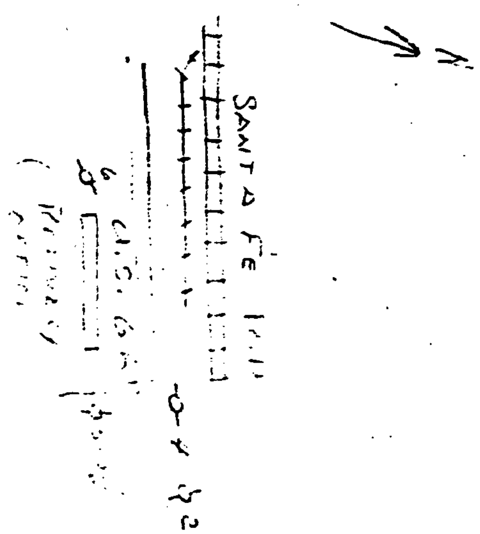
VI. HAZARD DESCRIPTION

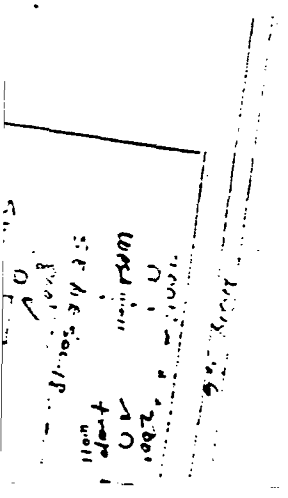
A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY	X			
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER	X			
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

NOTE: TOP OF [illegible] [illegible]
0.2' ABOVE TOP OF CASING.

WELL 15'E OF ROAD, 91'± E OF
E END OF OFFICE, 150'S OF Hwy 66,
11' FROM POWER POLE, 15' NE OF
TURNSTILE IN GATE,

8-2-61
No equipment.
Open csg. Covered with
Board 5" ID csg.
M/W [illegible] 81.00
[illegible] 1.40
79.[illegible]0 79.60
[illegible]
[illegible]
[illegible] LS





9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

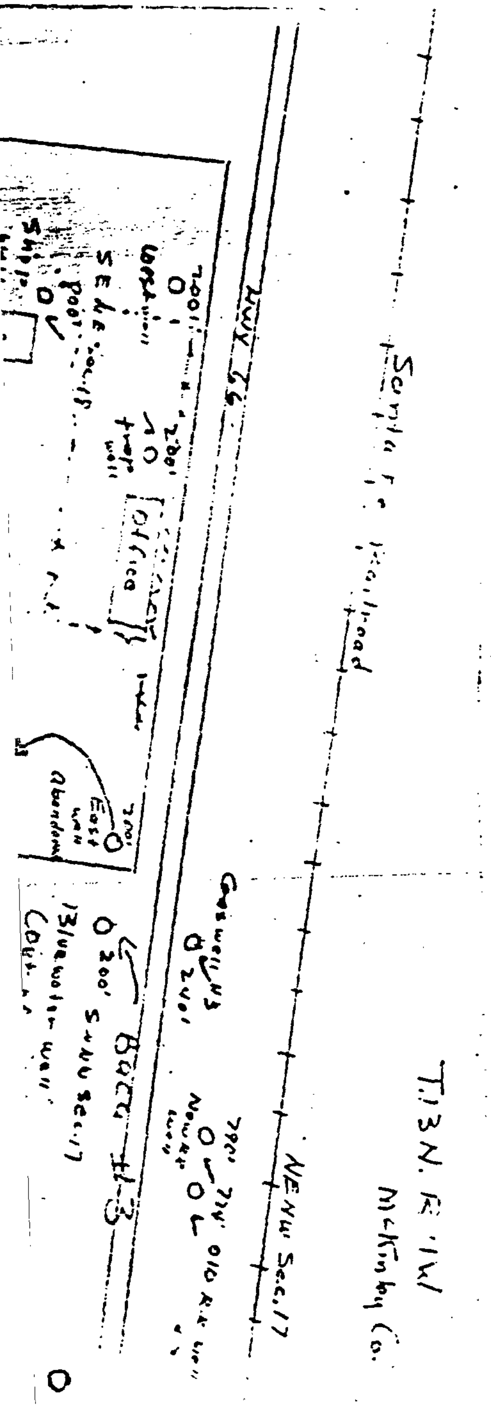
Date ________________, 19____ Field No. ________

Record by ________________ Office No. ________

Source of data ________________

1. *Location:* State ________ County ________

Map ________________



9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date 6-23-48, 19___ Field No. [illegible]

Record by [illegible] Office No. [illegible]

Source of data [illegible]

1. *Location:* State N. Mex. County McKinley
   Map ______
   NW ¼ NW ¼ sec. 17 T. 13 N R. 11 W
2. *Owner:* [illegible] Address [illegible]
   Tenant [illegible] Address [illegible]
   Driller [illegible] Address [illegible]
3. *Topography* [illegible]
4. *Elevation* ______ ft. above/below ______
5. *Type:* Dug, drilled, driven, bored, jetted ______ 19___
6. *Depth:* Rept. [illegible] ft. Meas. ______ ft.
7. *Casing:* Diam. 6 in., to ______ in., Type ______
   Depth ______ ft., Finish ______
8. *Chief Aquifer* ______ From ______ ft. to ______ ft.
   Others ______
9. *Water level* 45.62 ft. rept./meas. 6-23 1948 above/below top pump base [illegible] which is 0.4 ft. above/below surface
10. *Pump:* Type None Capacity ______ G. M.
    Power: Kind ______ Horsepower ______
11. *Yield:* Flow ______ G. M., Pump ______ G. M., Meas., Rept. Est. ______
    Drawdown ______ ft. after ______ hours pumping ______ G. M.
12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs. Unused
    Adequacy, permanence ______
13. *Quality* ______ Temp — °F.
    Taste, odor, color ______ Sample Yes/No
    Unfit for ______
14. *Remarks:* (Log, Analyses, etc.)
    Good [illegible] well?
    Note: Top pump [illegible] sketch on back
    base is 6.20' [illegible]

9-185—July 1935
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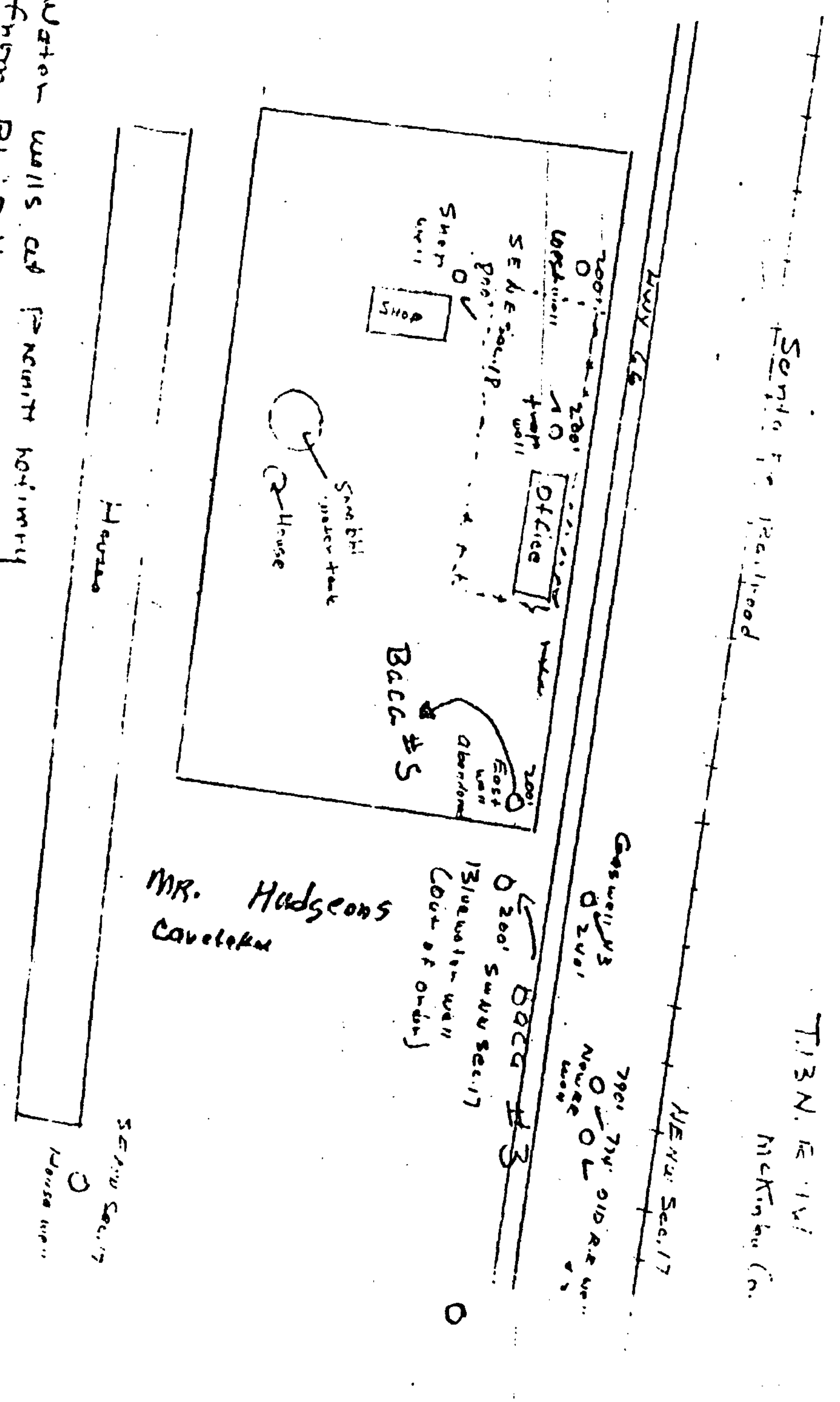
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date 6-23-48, 19..... Field No. Bacc #5
Record by LCH & ACP Office No. 20-13-5
Source of data Obs

1. *Location:* State N. Mex County McKinley
Map
NW ¼ NW ¼ sec. 17 T. 13 (N) R. 11
2. *Owner:* Pet. Prod. Ref. & Production Co. Address Prewitt NM
Tenant do Address do
Driller .... Address do.
3. *Topography* Flat
4. *Elevation* .... ft. above/below
5. *Type:* Dug, (drilled), driven, bored, jetted ...... 19....
6. *Depth:* Rept. 200± ft. Meas. .... ft.
7. *Casing:* Diam. 6 in., to .... in., Type ....
Depth .... ft., Finish ....
8. *Chief Aquifer* .... From .... ft. to ....
Others ....
9. *Water level* 95.62 ft. rept./(meas.) 6-23 1948 above/below top of base in hole E side which is 0.4 ft. above/below surface
10. *Pump:* Type None Capacity .... G. M.
Power: Kind .... Horsepower ....
11. *Yield:* Flow .... G. M., Pump .... G. M., Meas., Rept. Est. ....
Drawdown .... ft. after .... hours pumping .... G. M.
12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs. Unused
Adequacy, permanence ....
13. *Quality* .... Temp — °
Taste, odor, color .... Sample Yes/(No)
Unfit for ....
14. *Remarks:* (Log, Analyses, etc.)
Good obs. well?
Note: plot map see sketch on back
base is 6.70 ....



Water wells at Prewitt Refinery
from Phil D. Holmig, Chief Geol.
....

PREWITT REFINERY

WATER WELL TESTS PRIOR TO CLEAN OUT

WELL	HR TEST	GALS HR° /Test	GALS WTR. /Min.	GALS WTR. Aver. /24 hours	TYPE PUMP	SIZE CSG.	T.D.	REMARKS
East Well Sec. 17 SW NW T13N-R11W	0	0	0	0	None	5½"	185'	Well was not on Production, Thought to be dry
Blue Wtr. Well SW NE Sec. 17-13N-R11W	13½	6968.8	8.6	12,424.8	Peerless Hilift 2 H.P. 10660 Sq. Type	5½"	199'	Well is purping good drinking wtr. (Larger Pump?)
Deep Wtr. Well NE NW Sec. 17-13N R11W	¼	1500	20	28,800	2-3/4" plunger type 2" rod ¾" tubing	5½" o/4" liner	774"	Pump set @425' 10' working bbl Jack O.S.C. 5-H.P. Motor Gen. 10 H.P. 3 Ph. 220/14 volts.
Gas Well NW NE Sec. 17 T13N-R11W	3½	176	8.4	12,096	Peerless jet pump 2" 1½"	5½"	200'	Well loss gasoline seepage.
East Well NE NE Sec.18 T13N-R11W	¼	90	6	8,640	Peerless Hilift Squeeze Type 2 H.P.	5½"	195'	Pump is pumping off - Air
Trap Well NE NE Sec.18 T13N-R11W	¼	35	5.7	8,208	Peerless Hi/Lift Sq. Type 2 H.P. 10508J	5½"	205'	Pump @ 140' Well not pumping full capacity. clean cart - Put in jet pump
TOTAL			48.7	69,769				

PEERLESS SQUEEZE TYPE PUMP & Maximum Capacity
10 to 13 gal./min.
JET TYPE PUMPS w/2" and 1½" tubing capacity
25 gal/min in upper stage.

9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date ...., 19 42 Field No. Baca ...
Record by .... Office No. ....
Source of data ....

1. Location: State N. Mex. County McKinley
Map ....
... ¼ ... ¼ sec. 17 T. 13 N R. 11 W
2. Owner: .... Address Prewitt
Tenant .... Address Do
Driller .... Address Do
3. Topography ....
4. Elevation .... ft. above/below
5. Type: Dug, drilled, driven, bored, jetted ...... 19....
6. Depth: Rept. .... ft. Meas. .... ft.
7. Casing: Diam. 6 in., to ...... in., Type ....
Depth ...... ft., Finish ....
8. Chief Aquifer .... From ...... ft. to ...... ft.
Others ....
9. Water level ...... ft. rept./meas. ...... 19.... above/below
.... which is ...... ft. above/below surface
10. Pump: Type .... Capacity ...... G. M.
Power: Kind .... Horsepower 2
11. Yield: Flow ...... G. M., Pump 20 G. M., Meas., Rept., Est.
Drawdown ...... ft. after ...... hours pumping ...... G. M.
12. Use: Dom., Stock, PS., RR., Ind., Irr., Obs.
Adequacy, permanence ....
13. Quality .... Temp 55 °F.
Taste, odor, color .... Sample Yes/No 6/...
Unfit for ....
14. Remarks: (Log, Analyses, etc.) ....

BACA #4

U. S. GOVERNMENT PRINTING OFFICE 6—7473 13.11.17.114a

20-1.3-...
9-2.3

UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

13.11.17.114a

ANALYTICAL STATEMENT
(Parts per million)

Location Prewitt (½ Mi. E) McKinley Co. New Mexico Use Ind. Date 6/23/48

Source Drilled Well
Baca No. 4, NW NW 1/4 sec. 17 T13 N R11W, Depth 200' Diam 6", PC Dis Pip, Owner Pet.Prod.Ref & Prod.Co. WBF Chinle, WL-Pumping Y20G.M., Est, T-55°F, App-Clear, One of 3 wells at refinery

Color	Temp 55 °F	SiO_2	
Suspended matter		Fe	
Hardness (calc.)		Ca	
Ignition loss		Mg	
Specific conductance (micromhos at 25°C.)	641	Na	
		K	
		CO_3	0
		HCO_3	320
		SO_4	
		Cl	13
		F	
		NO_3	
		Sum	

Chemist L.S.Hughes & J.L.Hatchett
Lab. No. 10,266
Collector L.O.H. & A.D.P.

ORIGINAL RECORD

21

ON ROW BETWEEN HWY 64 + SFRR, 10' N OF POWER POLE, [illegible]'S NE OF REFINERY, OFFICE

8-2-61 SBE [illegible] P/W from top csg = LS.

65.00	66.00
5.61	6.62
59.39	59.38

No equipment. light iron plate welded on csg.

Strong odor [illegible] of [illegible],

GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date [illegible], 19...... Field No. [illegible]

Record by [illegible] Office No. [illegible]

Source of data [illegible]

1. *Location:* State [illegible] County [illegible]

Map

[illegible] ¼ [illegible] ¼ sec. 17 T [illegible] N/S R [illegible] E/W

2. *Owner:* [illegible] Address [illegible]

Tenant [illegible] Address do.

Driller [illegible] Address do.

3. *Topography*

4. *Elevation* .... ft. above/below

[illegible] 19

Location Pr[illegible]
New
Source D[illegible]
Baca I[illegible]
17 T[illegible]
Diam 6[illegible]
Pet.Pr[illegible]
WSF Ch[illegible]
T20G.[illegible]
App-Cl[illegible]
at ref[illegible]

GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date ..... , 19..... Field No. .....

Record by ..... Office No. .....

Source of data .....

1. *Location:* State ..... County .....

Map .....

..... ¼ ..... ¼ sec. ..... T ..... $\frac{N}{S}$ R ..... $\frac{E}{W}$

2. *Owner:* ..... Address .....

Tenant ..... Address .....

Driller ..... Address .....

3. *Topography* .....

4. *Elevation* ..... ft. $\frac{\text{above}}{\text{below}}$ .....

5. *Type:* Dug, drilled, driven, bored, jetted ..... 19.....

6. *Depth:* Rept. ..... ft. Meas. ..... ft.

7. *Casing:* Diam. ..... in., to ..... in., Type .....

Depth ..... ft., Finish .....

8. *Chief Aquifer* ..... From ..... ft. to ..... ft

Others .....

9. *Water level* ..... ft. $\frac{\text{rept.}}{\text{meas.}}$ ..... 19..... $\frac{\text{above}}{\text{below}}$ .....

..... which is ..... ft. $\frac{\text{above}}{\text{below}}$ surface

10. *Pump:* Type ..... Capacity ..... G. M. .....

Power: Kind ..... Horsepower .....

11. *Yield:* Flow ..... G. M., Pump ..... G. M., Meas., Rept. Est. .....

Drawdown ..... ft. after ..... hours pumping ..... G. M.

12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs. .....

Adequacy, permanence .....

13. *Quality* ..... Temp ..... °F.

Taste, odor, color ..... Sample $\frac{\text{Yes}}{\text{No}}$ .....

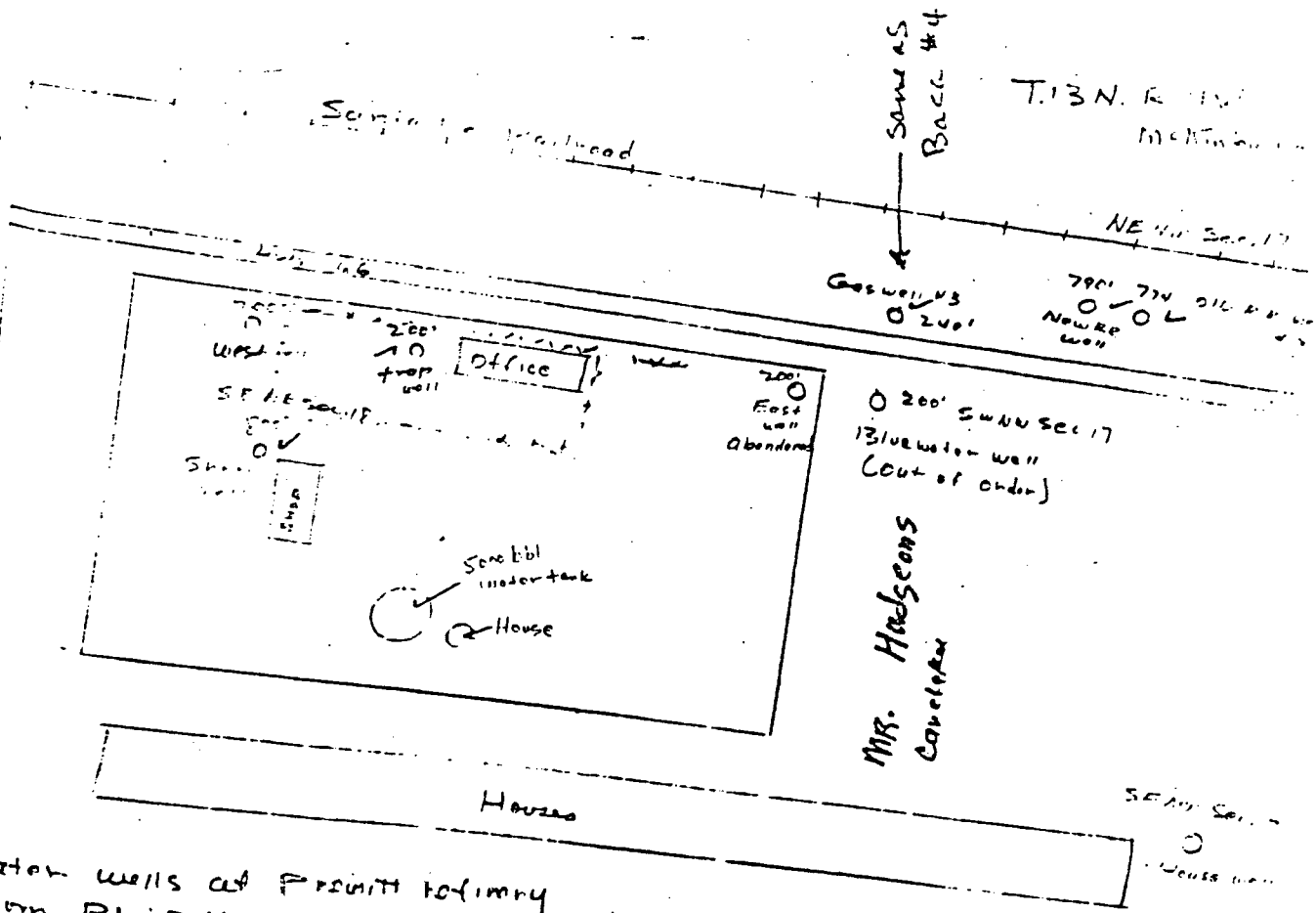
Unfit for .....

14. *Remarks:* (Log, Analyses, etc.) .....

.....

.....

U. S. GOVERNMENT PRINTING OFFICE 6—7473



Water wells at Prewitt Reformy
from Phil D. Helms - Chief Geol.

PREWITT REFINERY
WATER WELL TESTS PRIOR TO CLEAN OUT

WELL	HR TEST	GALS HZ° /Test	GALS WTR. /Min.	GALS WTR. Aver. /24 hours	TYPE PUMP	SIZE CSG.	T.D.	REMARKS
East Well Sec. 17 SW NW T13N-R11W	0	0	0	0	None	5½"	185'	Well was not on Production, Thought to be dry
Blue Wtr. Well SW NE Sec. 17-13N-R11W	13½	6988.8	8.6	12,424.8	Peerless Hilift 2 H.P. 10650 Sq. Type	5½"	159'	Well is pumping good drinking wtr. (Larger Pump?)
Deep Wtr. Well NE SW Sec. 17-13N R11W	½	1500	20	28,800	2-3/4" plunger type 2" rod 1/4" tubing	5½" s/4" liner	774"	Pump set @425' 10' working bbl Jack O.S.C. 5-H.P. Motor Gen. 10 H.P. 3 Ph. 220/14 volts.
Gas Well NW NW Sec. 17 T13N-R11W	3½	1764	8.4	12,096	Peerless jet pump 2" 1½"	5½"	200'	Well loss gasoline seepage.
Water Well NE NE Sec.18 T13N-R11W	½	90	6	8,640	Peerless Hilift Squeeze Type 2 H.P.	5½"	155'	Pump is pumping off - Air
Trap Well NE NE Sec.18 T13N-R11W	½	35	5.7	8,208	Peerless Hi/Lift Sq. Type 2 H.P. 10508#	5½"	205'	Pump @ 140' Well not pumping full capacity. clean out - Put in jet pump
TOTAL			48.7	69,769				

PEERLESS SQUEEZE TYPE PUMP 6 Maximum Capacity
10 to 13 gal./min.
JET TYPE PUMPS w/2" and 1½" tubing capacity
25 gal/min in upper stage.

Malco Refineries, Inc.

P. O. BOX 660
ROSWELL, NEW MEXICO

SMK 21

July 6th, 1954

13.11.17.113

Mr. Clyde S. Conover
District Engineer - GW
Ground Water Branch U.S.G.S.
P. O. Box 443
Albuquerque, New Mexico

RE: Prewitt Refinery Water Wells
McKinley County, New Mexico

Dear Mr. Conover:

Enclosed you will find a sketch map showing the water well locations at Prewitt Refinery together with pumping tests in July this year plus three well logs and tests prior to clean out.

I am sorry there has been such a delay in getting this data to you but I was under the impression that it had been sent to you when we first started working on the wells.

It is my opinion that the Shop well and the Santa Fe R. R. wells have penetrated the San Andres limestone and part of the Glorieta sandstone and that the San Andres limestone is definitely present in the Prewitt area. I measured 50 feet of San Andres at several places in Bluewater Canyon to the south and that is about the thickness of the lime at Prewitt. Depth and thickness of beds all fit the relative position of the San Andres at Bluewater Canyon and Prewitt.

We plan to deepen the Shop well through the Glorieta sandstone at this date to increase the water. Moving south will not make depth much shallower. If your organization has any suggestions, we would certainly appreciate hearing of them.

Very truly yours,

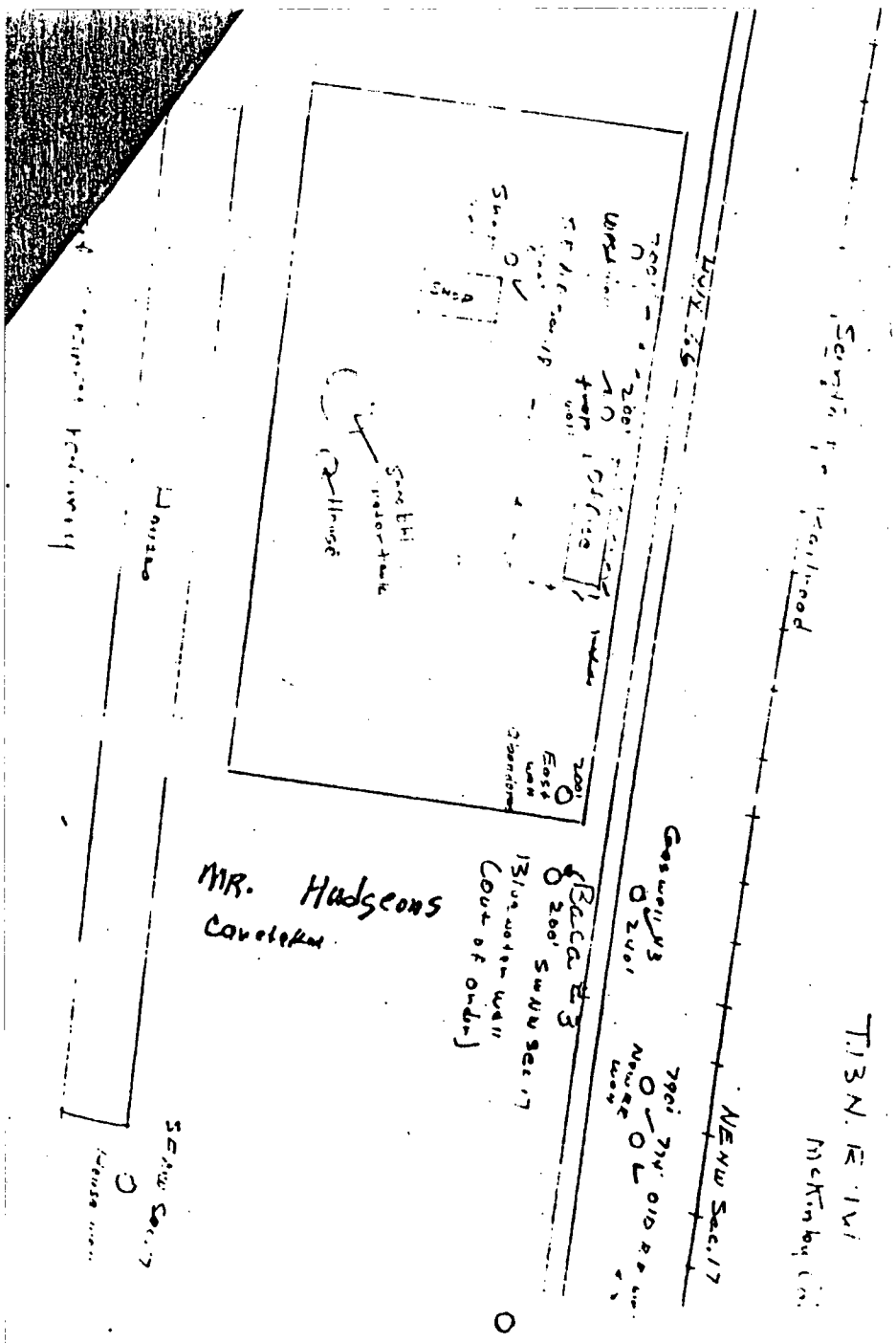
MALCO REFINERIES, INC.

Phil D. Helmig

Phil D. Helmig
Chief Geologist

/sa

Box 45 / Prewitt Well



9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date ..... , 19..... Field No. .....

Record by ..... Office No. .....

Source of data .....

1. *Location:* State ..... County .....

Map .....

..... ¼ ..... ¼ sec. ..... T. ..... N. S. R. ..... E. W.

2. *Owner:* ..... Address .....

Tenant ..... Address .....

Driller ..... Address .....

3. *Topography* .....

4. *Elevation* ..... ft. above / below .....

5. *Type:* Dug, drilled, driven, bored, jetted ..... 19....

6. *Depth:* Rept. ..... ft. Meas. ..... ft.

7. *Casing:* Diam. ..... in., to ..... in., Type .....

Depth ..... ft., Finish .....

8. *Chief Aquifer* ..... From ..... ft. to ..... ft.

Others .....

9. *Water level* ..... ft. rept. / meas. ..... 19..... above / below .....

..... which is ..... ft. above / below surface

10. *Pump:* Type ..... Capacity ..... G. M. .....

Power: Kind ..... Horsepower .....

11. *Yield:* Flow ..... G. M., Pump ..... G. M., Meas., Rept. Est. .....

Drawdown ..... ft. after ..... hours pumping ..... G. M.

12. *Use:* Dom., Stock, PS., RR., (Ind.) Irr., Obs. .....

Adequacy, permanence .....

13. *Quality* ..... Temp ..... °F.

Taste, odor, color ..... Sample Yes / No .....

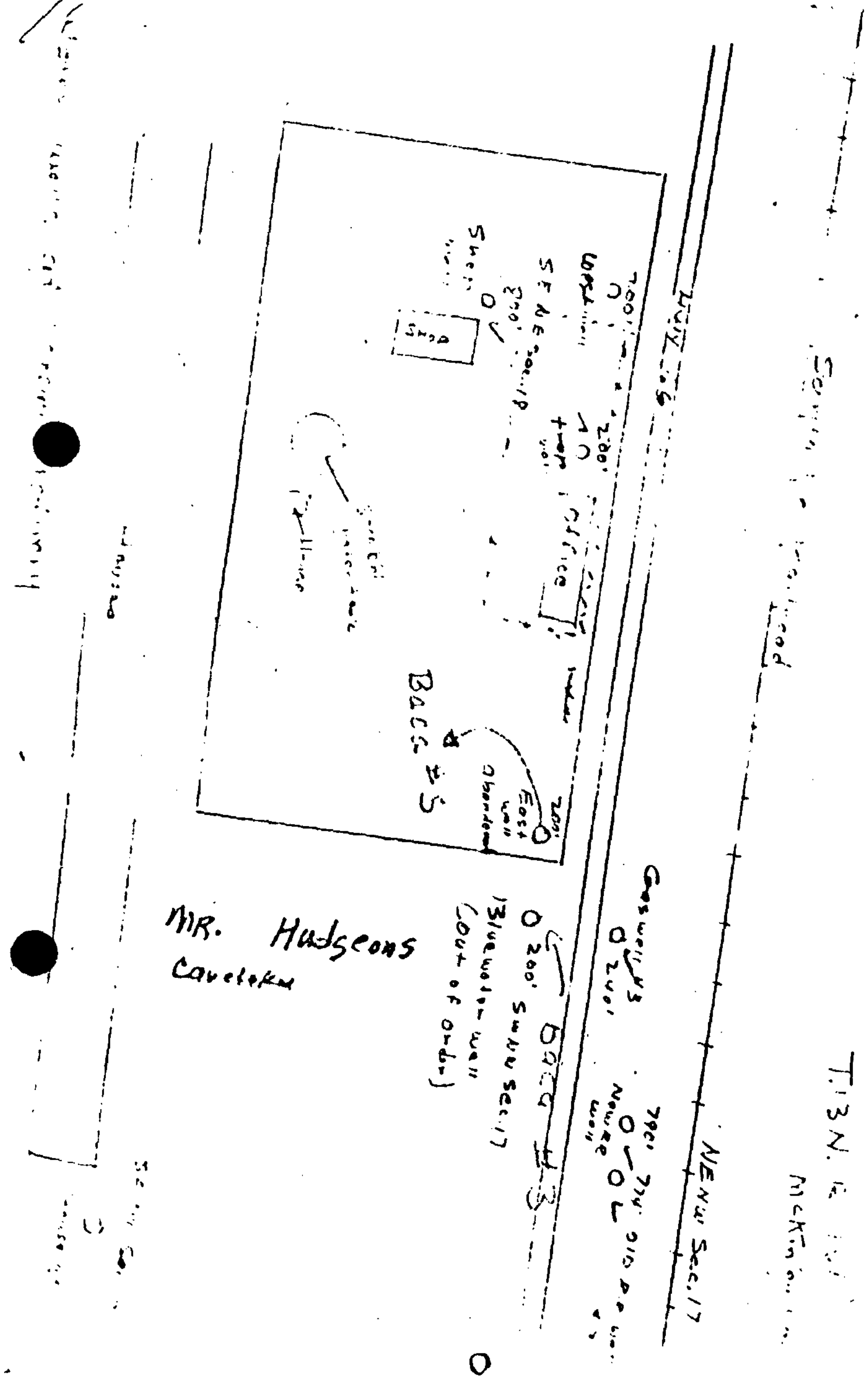
Unfit for .....

14. *Remarks:* (Log, Analyses, etc.) .....

.....

.....

U. S. GOVERNMENT PRINTING OFFICE 0-- 7173



9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

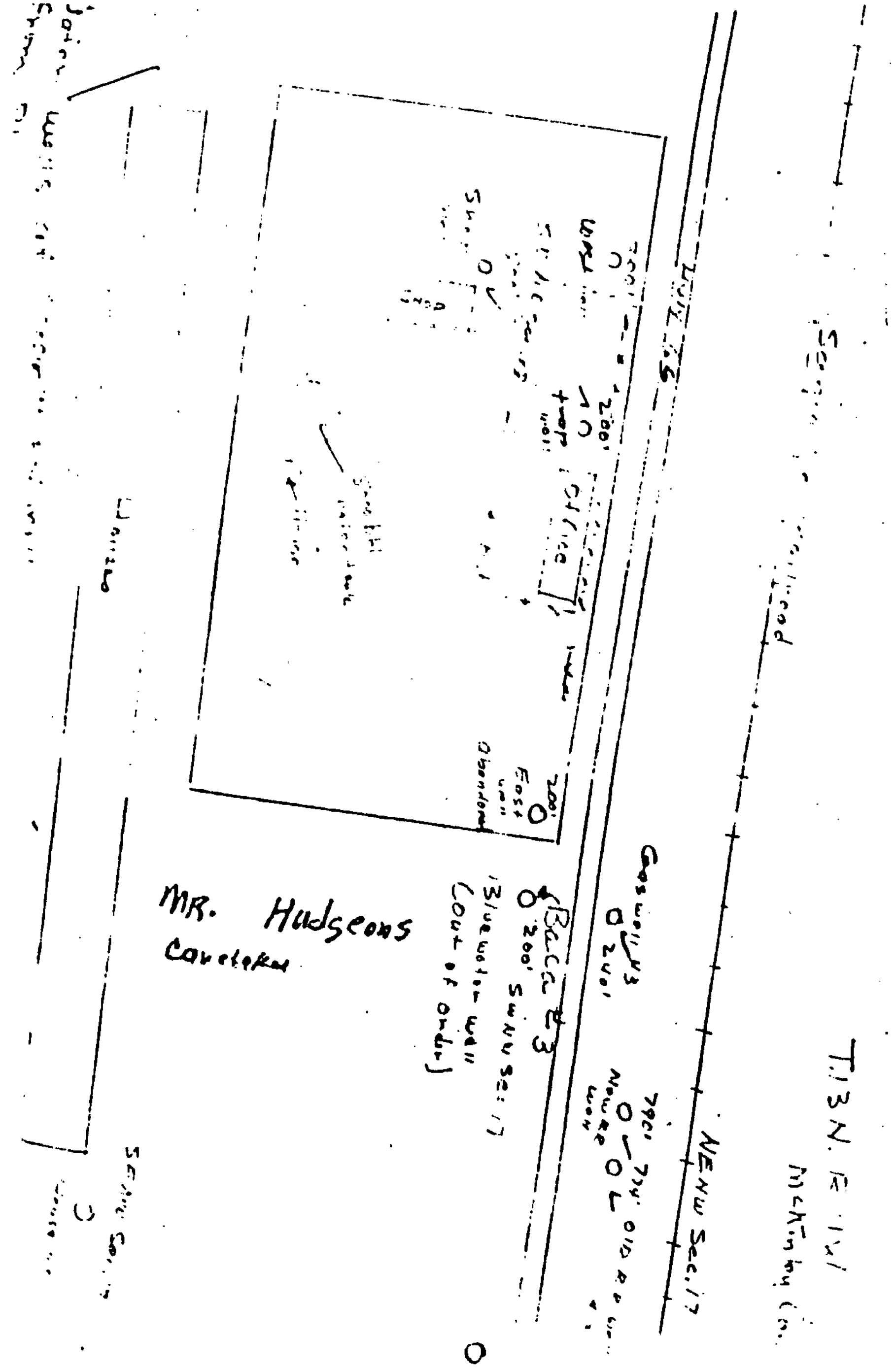
WELL SCHEDULE

Date June 23, 1948 Field No. BACA #5
Record by LCH + ADP Office No.
Source of data OBS.

1. *Location:* State N. Mex. County McKinley
Map Baca
SW NW ¼ NW ¼ sec. 17 T. 13 N R. 11 W
2. *Owner:* [illegible] Address Prewitt, N.M.
Tenant Do Address Do
Driller [illegible] Address Do
3. *Topography* Flat
4. *Elevation* ft. above/below
5. *Type:* Dug, drilled, driven, bored, jetted 19
6. *Depth:* Rept. 200 ± ft. Meas. Attached ft.
7. *Casing:* Diam. 6 in., to in., Type TABLE
Depth ft., Finish
8. *Chief Aquifer* From ft. to ft.
Others T.C.
9. *Water level* [illegible] ft. rept./meas. 6/23 1948 above/below Top of [illegible] which is 0.4 ft. above/below surface
10. *Pump:* Type None Capacity G. M.
Power: Kind Horsepower
11. *Yield:* Flow G. M., Pump G. M., Meas., Rept. Est.
Drawdown ft. after hours pumping G. M.
12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs. Unused
Adequacy, permanence
13. *Quality* Temp — °F.
Taste, odor, color Sample Yes/No
Unfit for
14. *Remarks:* (Log, Analyses, etc.) Good Obs. Well
[illegible]
[illegible]

BACA #5

U.S. GOVERNMENT PRINTING OFFICE 13.11.17.113



9-185—July 1935
Revised

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

WELL SCHEDULE

Date ...., 19.... Field No. Baca #3
Record by .... Office No. ....
Source of data ....

1. *Location:* State .... County McKinley
Map ....
SW ¼ ..... ¼ sec. 17 T. 13 N R. 1 W
2. *Owner:* .... Address ....
Tenant .... Address ....
Driller .... Address ....
3. *Topography* ....
4. *Elevation* .... ft. above / below
5. *Type:* Dug, drilled, driven, bored, jetted .... 19....
6. *Depth:* Rept. .... ft. Meas. .... ft.
7. *Casing:* Diam. 6 in., to .... in., Type ....
Depth .... ft., Finish ....
8. *Chief Aquifer* .... From .... ft. to .... ft
Others ....
9. *Water level* .... ft. rept. / meas. .... 19.... above / below T.C.
.... which is 0.3 ft. above / below surface
10. *Pump:* Type .... Capacity .... G. M.
Power: Kind .... Horsepower 2
11. *Yield:* Flow .... G. M., Pump .... G. M., Meas., Rept. Est.
Drawdown .... ft. after .... hours pumping .... G. M.
12. *Use:* Dom., Stock, PS., RR., Ind., Irr., Obs.
Adequacy, permanence ....
13. *Quality* .... Temp 56 °F.
Taste, odor, color .... Sample Yes / No
Unfit for ....
14. *Remarks:* (Log, Analyses, etc.) ....

BACA #3

U. S. GOVERNMENT PRINTING OFFICE 13.11.17.113a

[illegible] S OF [illegible], [illegible] E OF
[illegible] END OF REFINERY OFFICE, [illegible]E
[illegible] POWER [illegible], [illegible] OF OVAL
STEEL WATER TANK ON GROUND.
SEE SKETCH ON #5.

8-2-61
No equipment [illegible] Board
[illegible] & [illegible] [illegible] Reg. [illegible]
[illegible] 6" [illegible] [illegible] I.E. [illegible]
[illegible]

[illegible] 84.00 83.00
3.78 2.78
80.22 80.22

PREWITT REFINERY

WATER WELL TESTS PRIOR TO CLEAN OUT

WELL	HR TEST	GALS WTR° /Test	GALS WTR. /Min.Aver.	GALS WTR. /24 hours	TYPE PUMP	SIZE CSG.	T.D.	REMARKS
East Well Sec. 17 SW NW T13N-R11W	0	0	0	0	None	5½"	185'	Well was not on Production, Thought to be dry
Blue Wtr. Well SW NE Sec. 17-13N-R11W	13½	6968.8	8.6	12,424.8	Peerless Hilift 2 H.P. 10660 Sq. Type	5½"	199'	Well is purping good drinking wtr. (Larger Pump?)
Deep Wtr. Well NE NW Sec. 17-13N R11W	½	1500	20	28,800	2-3/4" plunger type 2" rod 3/4" tubing	5½" 0/4" liner	774"	Pump set @425' 10' working bbl Jack O.S.C. 5-H.P. Motor Gen. 10 H.P. 3 Ph. 220/14 volts.
Gas Well NW NE Sec. 17 T13N-R11W	3½	1764	8.4	12,096	Peerless jet pump 2" 1½"	5½"	200'	Well loss gasoline seepage.
East Well NE NE Sec.18 T13N-R11W	½	90	6	8,640	Peerless Hilift Squeeze Type 2 H.P.	5½"	195'	Pump is pumping off - Air
Trap Well NW NE Sec.18 T13N-R11W	½	35	5.7	8,208	Peerless Hi/Lift Sq. Type 2 H.P. 10503	5½"	205'	Pump @ 140' Well not pumping full capacity. clean out - Put in jet pump
TOTAL			48.7	69,769				

PEERLESS SQUEEZE TYPE PUMP & Maximum Capacity
10 to 13 gal./min.

JET TYPE PUMPS w/2" and 1½" tubing capacity
25 gal/min in upper stage.