

2R - 26

REPORTS

DATE:

Sept. 19, 1996

TELEPHONE
(505) 748-3311

EASYLINK
62905278



REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

September 19, 1996

Mr. William C. Olson
Hydrogeologist - Environmental Bureau
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

CERTIFIED MAIL/RETURN RECEIPT
P 355 936 200

**RE: Report on Installation of Remediation Wells
N. 13th and HWY 285
Artesia, New Mexico**

Dear Mr. Olson:

Navajo Refining Co. has completed installation of the two soil vapor extraction wells called for in our approved "Remediation Plan - Navajo Truck Accident Site, N. 13th and Highway 285 - Artesia, May 9, 1996." Your plan approval letter of July 10, 1996 required Navajo to report certain information upon completion of the well installation. This report address those requirements.

1. SOIL SAMPLES

Soil Samples were collected from each borehole at five foot intervals. The samples were screened on-site by Ray Smith and Brian Arrant of the NMOCD - District Office in Artesia, using their OVA meter. Sets of samples were also collected for analyses by Trace Analysis, Inc. of Lubbock, Texas. The samples were placed in clean soil sample containers supplied by Trace and then iced down for overnight shipment to the Laboratory. The samples were analyzed for BTEX and TPH per your specifications.

The results of these sample analyses are attached. The samples were identified by the well they came from (either TW1 or TW2) and by the depth from which they were collected (5, 10, 15 ft. etc.). You will notice there is no sample for TW1-25. At the 25 foot depth in Well number 1, a zone of dry hard gravel was encountered and the split spoon core sampler could not retrieve a sample. A sample from the same depth and same gravel zone in Well number 2 did yield just enough sample to send to the lab.

As you can see from the results, Navajo drilled through the bottom of the contamination thus determining the verticle extent of the spilled material.

2. DESCRIPTION OF ACTIVITIES

Navajo has included a section of the USGS Quadrangle map showing the location of the site. Also enclosed are photos of the wells before and after the turbine ventilators were installed.

In addition to the map and photos, you will find copies of the well lithologic logs. Shown on the lithologic log sheets are the well completion diagrams.

Atkins Engineering Associates, Inc. of Roswell was the drilling contractor who installed the wells for Navajo. After postponement for a week due to heavy rain, both wells were drilled and completed on Tuesday, September 10, 1996. The samples were shipped to the lab on the same day.

Osberving the installation and assisting by screening the samples for the presence of hydrocarbons were Mr. Ray Smith and Mr. Bryan Arrant of NMOCD. Mr. Victor Santillan of the New Mexico Highway Department also paid an inspection visit during the well installation.

The actual drilling and well installation went fairly smoothly. Well number one was drilled five feet deeper than expected due to the finding of contamination deeper than expected.

In well number one water saturation was encountered at 44 ft. as seen in the 2 ft. core from 43-45ft. The core sample from 43 to 44 ft. had no odor of hydrocarbon indicating the contamination stopped short of impacting any groundwater. Sample TW1-45 was collected from the saturated zone thus confirming no impact to groundwater.

Some gravel collapsed into the bottom of well number one from zones above before the screen could be inserted, thus there is 37 ft. of screen and pipe in well one with native gravel pack from 37 ft. to a total depth of 45 ft. The most interesting zone encountered was the hard dry gravel from 24 ft. to 27 ft. The rock brought up by the auger was so clean and well sorted, it looked like screened and washed gravel ready for a construction project.

The drilling of well number two also went smoothly. As in well one, number two had traces of contamination deeper than expected. The unusual gravel layer was also seen in well two and it appeared to be a little thicker. Number two was drilled to 38 ft. TD with 4 inch screen set to 35 ft.

The installation went very well and Navajo will be monitoring and reporting per your schedule in the July 10, 1996 approval letter. If you have any questions, please call me at (505) 748-3311.

Sincerely,



David G. Griffin
Manager of Environmental
Affairs for Water & Waste

DGG/sb

cc: Mr. Ray Smith - NMOCD - Artesia
Mr. Eloy M. Ramirez - NM Highway Dept. - Roswell

TRACE ANALYSIS, INC.

670 Aberdeen Avenue

Libbock, Texas 79424

806•794•1296

FAX 806•794•1293

September 13, 1996
 Receiving Date: 09/12/96
 Sample Type: Soil
 Project No: NA
 Project Location: Artesia, NM

ANALYTICAL RESULTS FOR
 NAVAJO REFINING
 Attention: Darrell Moore
 501 E. Main
 Artesia, NM 88210

Prep Date: 09/12/96
 Analysis Date: 09/12/96
 Sampling Date: 09/10/96
 Sample Condition: Intact & Cool
 Sample Received by: ML
 Project Name: NA

TA#	Field Code	TRPHC (mg/kg)	MTBE (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	M,P,O XYLENE (mg/kg)	TOTAL BTEX (mg/kg)
T58755	TW1 - 5	4,410	<5.000	10.800	88.000	8.430	136.000	243.230
T58756	TW1 - 10	2,650	<5.000	5.850	34.500	<5.000	75.500	115.850
T58757	TW1 - 15	2,540	<5.000	5.200	29.100	<5.000	65.100	99.400
T58758	TW1 - 20	4,950	7.130	11.400	95.200	11.400	205.000	323.000
T58759	TW1 - 30	2,420	<5.000	8.440	46.900	5.190	91.900	152.430
T58760	TW1 - 35	29	0.081	0.308	0.951	0.074	1.340	2.673
T58761	TW1 - 40	575	<1.000	<1.000	5.840	<1.000	17.200	23.040
T58762	TW1 - 45	<10	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
T58763	TW2 - 5	1,700	<5.000	<5.000	41.400	<5.000	73.300	114.400
T58764	TW2 - 10	1,050	0.904	3.210	23.700	3.040	51.500	81.450
T58765	TW2 - 15	2,730	<5.000	5.580	31.000	<5.000	70.100	106.680
T58766	TW2 - 20	2,070	<5.000	5.350	29.600	<5.000	64.300	99.250
T58767	TW2 - 25	832	<2.000	<2.000	10.200	<2.000	27.500	37.700
T58768	TW2 - 30	110	0.187	0.433	3.200	0.372	6.990	10.995
T58769	TW2 - 35	<10	<0.050	0.075	<0.050	<0.050	<0.050	0.075
QC	Quality Control	100	0.095	0.098	0.099	0.100	0.297	
Reporting Limit		10	0.050	0.050	0.050	0.050	0.050	
RPD		8	6	1	2	2	2	
% Extraction Accuracy		120	85	84	83	83	82	
% Instrument Accuracy		100	95	98	99	100	99	

METHODS: EPA SW 846-8020, 5030, 3550 High Level; EPA 418.1.

CHEMIST: TRPHC: RC

MTBE/BTEX: RW

MTBE/BTEX SPIKE: 5.000 mg/kg MTBE/BTEX.

MTBE/BTEX QC: 0.100 mg/L MTBE/BTEX.

TRPHC SPIKE: 250 mg/kg TRPHC.

TRPHC QC: 100 mg/L TRPHC.

Director, Dr. Blair Leftwich
 Director, Dr. Bruce McDonell

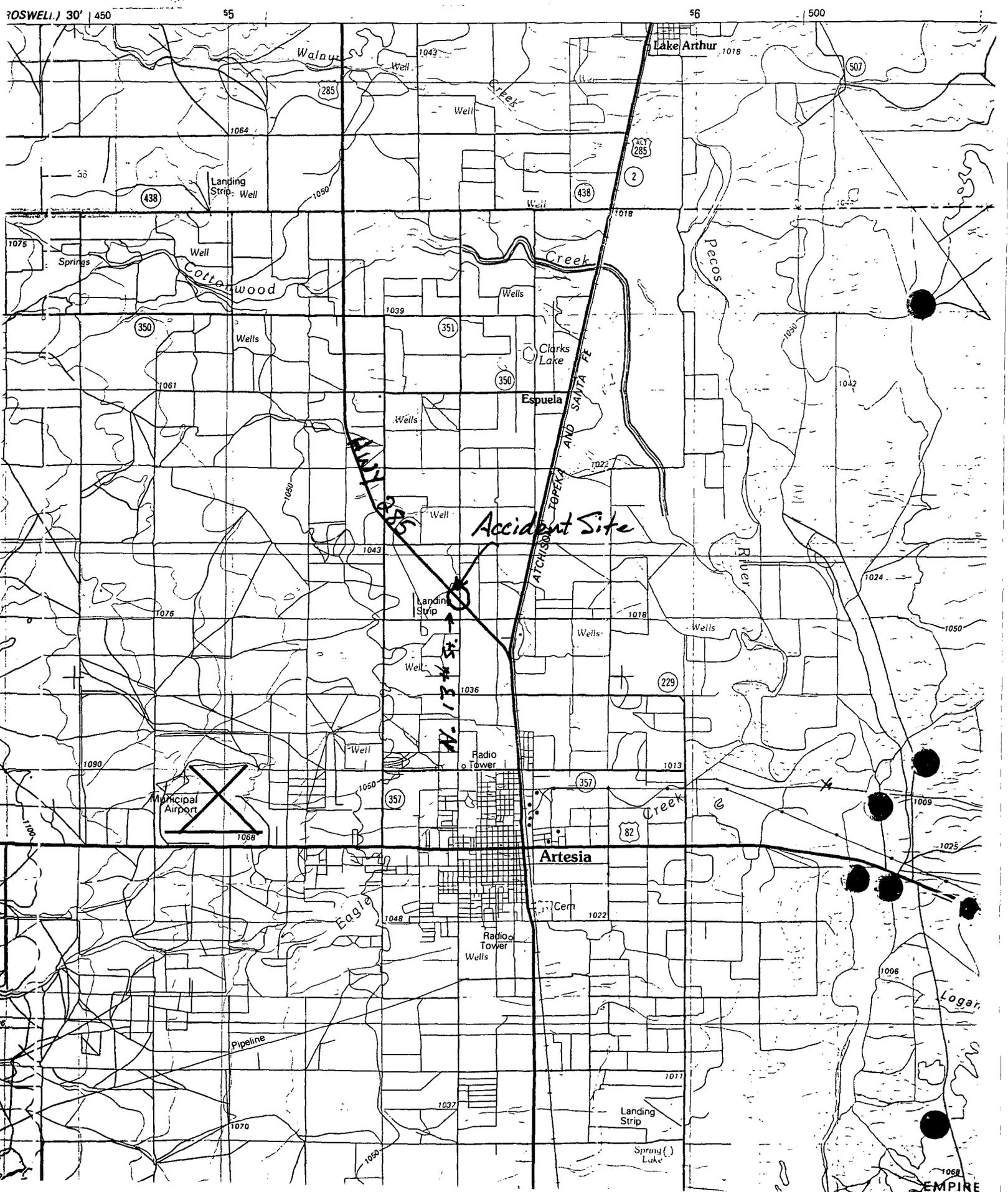
Date

9-13-96

Sep-16-96 07:15A

P.01

ARTESIA QUADRANGLE
NEW MEXICO
1:100 000-SCALE SERIES (TOPOGRAPHIC)





TW2

TW1

Soil Vapor Extraction
Wells TW1 & TW2
as Completed by Driller
9/10/96



TW2

TW1

Soil Vapor Extraction
Wells TW1 & TW2
Complete with
Wind Turbines
9/19/96

BORING LOG

TW1

PAGE 1 OF

DATE:
9/10/96

DRILL START:
7:10 AM
DRILL STOP:
12:00 PM

ATKINS ENGINEERING ASSOCIATES, INC

2904 West Second Street, Roswell, New Mexico 88202-3156

PROJECT NAME: Navajo Refining Co.- VE Wells

SITE LOCATION: 285 & 13TH ST., ARTESIA, NM

BORING LOCATION: Intersection of 285 & 13th
(15' West of 13th & 30' North of 285)

TH NUMBER: 1		AUGER TYPE: HOLLOW STEM	CASING ELEVATION: 3 ft. above L/S	Well Construction Details	PID Reading	Lab Analysis	Lab Analysis
Depth (Feet)	Samples	DRILLED BY: ATKINS ENGINEERING	LOGGED BY: MORT BATES				
		STRATUM DESCRIPTION					
		Clay & Gravel fill, Brown, Damp, Loose, Fuel Odor					
5		Silty Clay, Tan, Damp, Loose, Fuel Odor					
		Silty Clay, Tan, Moist, Firm, Fuel Odor					
10		Silty Clay w/gypsum, Tan, Moist, Firm, Fuel Odor					
15		Clay w/Gravel, Tan, Moist. Firm, Fuel Odor					
20							
25		50 Blows/ft., No Recovery, gravel Gravel; Gray, Dry, Hard					
30		Clay w/Trace of Caliche, Tan, Moist, Firm					

BORING LOG

ATKINS ENGINEERING ASSOCIATES, INC

2904 West Second Street, Roswell, New Mexico 88202-3156

PROJECT NAME: Navajo Refining Co.-VE Wells

PAGE 2 OF

DATE:
9/10/96

DRILL START: 7:10 AM
DRILL STOP: 12:00 PM

SITE LOCATION: 285 & 13TH ST., ARTESIA, NM

BORING LOCATION: Intersection of 285 & 13th
(15' West of 13th & 30' North of 285)

TH NUMBER: 1		AUGER TYPE: HOLLOW STEM	CASING ELEVATION: 3 ft. above L/S	Well Construction Details	PID Reading	Lab Analysis	Lab Analysis
Depth (Feet)	Samples	DRILLED BY: ATKINS ENGINEERING	LOGGED BY: MORT BATES				
		STRATUM DESCRIPTION					
		Clay, Tan, Firm, Fuel Odor					
35		Clay w/Sand & Gravel, Light Tan, Moist, Firm, Fuel Odor					
40		Clay, Redish Tan, Saturated, Firm					
45		<p>Total Depth at 45ft. Placed 30 ft. of 4 inch, .020 slot Sand packed 2 ft. above screen. Placed 7 ft. of Schedule 40, 4 inch PVC casing to top of land surface, 3 ft. of casing stubbed out above top of land surface, 2 ft. of Bentonite plug. 3 ft. of grout to land surface.</p>					
50							
55							
60							

BORING LOG

TW 2

ATKINS ENGINEERING ASSOCIATES, INC

2904 West Second Street, Roswell, New Mexico 88202-3158

PROJECT NAME: Navajo Refining Co.-VE Wells

PAGE 1 OF

DATE:

9/10/96

DRILL START:

1:20 PM

DRILL STOP:

5:00 PM

SITE LOCATION: 285 & 13TH STREET, ARTESIA, NM

BORING LOCATION: 25' NORTH OF T/H #1
15 FT. WEST OF 13TH STREET

TH NUMBER: 2		AUGER TYPE: HOLLOW STEM	CASING ELEVATION: 3 FT. ABOVE L/S	Well Construction Details	PID Reading	Lab Analysis	Lab Analysis
Depth (Feet)	Samples	DRILLED BY: ATKINS ENGINEERING	LOGGED BY: MORT BATES				
		STRATUM DESCRIPTION					
		Clay w/gravel fill, Tan, Dry, Firm					
5		Silty Clay, Tan, Damp, Firm, Fuel Odor					
		Silty Clay w/Gypsum, Tan, Moist, Firm, Fuel Odor					
10							
		Silty Clay w/gravel, Tan, Moist, Firm, Fuel Odor					
15							
		Gravel, Gray, Dry, Hard, Fuel Odor					
20							
		50 blows 2 inches					
25							
		Clay w/trace of Caliche, Tan, Firm, Fuel Odor					
30							

