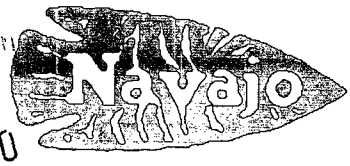
GW - 28

MONITORING REPORTS

DATE: 1994



REFINING COMPANY

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

TELEPHONE
(505) 748-3311

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

June 6, 1994

Mr. William Olson, Hydrogeologist
Environmental Bureau
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

RE: Semi- Annual Sampling of Monitor Wells Around Evaporation Ponds, Navajo Refining, Eddy County, New Mexico

Dear Bill,

We will be sampling the monitor wells around our Evaporation Ponds on June 20, 1994. As per OCD's letter of May 22, 1990, we are required to notify OCD two weeks in advance of the sampling so that you have an opportunity to split samples. This is a flexible schedule. We would be willing to sample anytime during the week of June 20-24 to accommodate OCD.

If you have any questions, please call me at 748-3311. Thank you for your time in this matter.

Sincerely,

Darrell Moore

Darrell Moore
Environmental Specialist

N DIVISION
REFINING COMPANY
94 AUG -4 AM 8 50
501 EAST MAIN STREET ◦ P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

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

August 2, 1994

Mr. Roger Anderson
NM Oil Conservation Division
Land Office Building
P.O. Box 2088
Santa Fe, NM 87501

RE: SPRING 1994 REPORT - GROUNDWATER SAMPLING AROUND EVAPORATION PONDS

Dear Roger:

Enclosed are results from our Spring 1994 sampling of the monitor wells around the evaporation ponds. This is on a staggered schedule per your letter of October 21, 1991. The following is a summary of field observations:

Well #	Groundwater ft amsL	pH	EC umhos	Deg. C	Description
MW-3	3300.17	7.4	4350	23	Slight Odor, Silty,
MW-4	3299.97	6.8	4550	23	Odor
MW-5	3299.59	7.1	10720	21	Moderate odor
MW-6	3300.45	6.8	8240	22	Mod. Odor, , Turbid
MW-7	3299.57	6.9	7680	21	Odor, Silty, Turbid
OCD-1	3302.66	7.0	7290	22	Odor,Murky
OCD-3	3300.55	7.0	9520	20	Murky, odor
OCD-5	3300.24	7.1	10550	20	Brown, Mild odor
OCD-7	3301.10	7.0	6400	22	Brown,Turbid

If you have any questions, please contact me at 748-3311, extension 281.

Respectfully yours,

Darrell Moore

Darrell Moore
Environmental Specialist

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22796	MW - 6	0.01	<0.001	<0.01	<0.05	<0.05	3.19	0.04	2.30	<0.05	0.88	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22796	MW - 6	<0.5	0.25	0.39	<0.2	0.03
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR

July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22797	MW - 4	0.02	<0.001	<0.01	0.29	0.08	113.0	0.28	135	<0.05	6.47	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22797	MW - 4	0.7	2.14	0.84	<0.2	0.10
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
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July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22798	MW - 3	0.01	<0.001	<0.01	<0.05	<0.05	11.1	0.03	4.28	<0.05	3.57	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22798	MW - 3	<0.5	0.14	0.80	<0.2	<0.01
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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7/22/94
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July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22799	MW - 5	0.01	<0.001	<0.01	0.08	<0.05	19.6	0.07	25.3	<0.05	3.52	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22799	MW - 5	<0.5	0.25	1.29	<0.2	0.05
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
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ANALYTICAL RESULTS FOR
NAVAJO REFINING

July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22800	MW - 7	0.01	<0.001	<0.01	<0.05	<0.05	24.3	0.04	2.06	<0.05	1.07	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22800	MW - 7	<0.5	0.07	1.13	<0.2	<0.01
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
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July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/21/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22801	OCD - 7	0.01	<0.001	<0.01	<0.05	<0.05	26.9	0.03	1.97	<0.05	5.80	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22801	OCD - 7	<0.5	0.08	0.69	<0.2	<0.01
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
DATE

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July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22802	OCD - 5	<0.01	<0.001	<0.01	<0.05	<0.05	6.95	0.04	1.81	<0.05	1.04	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22802	OCD - 5	<0.5	0.11	1.24	<0.2	0.03
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
DATE

TRACE ANALYSIS, INC.
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July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22803	OCD - 3	<0.01	<0.001	<0.01	<0.05	<0.05	7.23	0.03	8.18	<0.05	2.75	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22803	OCD - 3	<0.5	0.25	1.00	<0.2	<0.01
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

7/22/94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

July 22, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

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

Analysis Date: 07/22/94
Sampling Date: 06/22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Cd (ppm)	Hg (ppm)	Be (ppm)	V (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)
T22804	OCD - 1	<0.01	<0.001	<0.01	0.02	<0.05	1.88	0.03	2.46	<0.05	5.20	<0.05
QC	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT		0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision		100	100	100	100	101	100	100	101	102	100	101
% Extraction Accuracy		91	100	97	94	98	101	97	74	70	98	89
% Instrument Accuracy		106	100	102	103	103	104	106	108	98	107	103

TA#	FIELD CODE	U (ppm)	Ba (ppm)	B (ppm)	Se (ppm)	Ag (ppm)
T22804	OCD - 1	<0.5	0.12	0.64	<0.2	<0.01
QC	Quality Control	9.7	1.05	1.04	2.4	11.6
DETECTION LIMIT		0.5	0.05	0.05	0.2	0.01
% Precision		101	98	99	108	101
% Extraction Accuracy		100	90	104	118	111
% Instrument Accuracy		101	111	106	118	116

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U.

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

DATE

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

June 27, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds (Wells)
Project Location: NA

Analysis Date: 06/27/94
Sampling Date: 06/21-22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	Field Cod	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)	TOTAL BTEX (ppb)
T22796	MW - 6	<2	<2	<2	<2	<2
T22797	MW - 4	<2	<2	<2	<2	<2
T22798	MW - 3	<2	<2	<2	<2	<2
T22799	MW - 5	<2	<2	<2	<2	<2
T22800	MW - 7	<2	<2	<2	<2	<2
T22801	OCD - 7	<2	<2	<2	<2	<2
T22802	OCD - 5	<2	<2	<2	<2	<2
T22803	OCD - 3	<1	<1	<1	<1	<1
T22804	OCD - 1	<2	<2	<2	<2	<2
QC	Quality Control	200	200	201	605	
Detection Limit		1	1	1	1	
% Precision		99	99	100	100	
% Extraction Accuracy		99	98	100	99	
% Instrument Accuracy		100	100	100	101	

METHODS: EPA SW 846-8020.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.

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

7/15/94
Date

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

July 01, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap. Ponds
Project Location: NA (Wells)

Analysis Date: 06/26/94
Sampling Date: 06/21/94
Sample Condition: I & C
Sample Received by: BL
Project Name: NA

EPA 8270 Compounds (ppm)	T22796 MW - 6	Detection Limit	QC	%P	%EA	%IA
Naphthalene	ND	0.001	0.542	NR	NR	108
2-Methylnaphthalene	ND	0.001	0.486	NR	NR	97

ND = Not Detected

	% RECOVERY
2-Fluorophenol SURR	98
Phenol-d5 SURR	128
Nitrobenzene-d5 SURR	119
2-Fluorobiphenyl SURR	126
2,4,6-Tribromophenol SURR	115
Terphenyl-d14 SURR	126

METHODS: EPA 8270.

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

2/15/94
Date

6701 Aberdeen Avenue
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FAX 806•794•1298

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

July 01, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap. Ponds
Project Location: NA (Wells)

Analysis Date: 06/26/94
Sampling Date: 06/21/94
Sample Condition: I & C
Sample Received by: BL
Project Name: NA

EPA 8270 Compounds (ppm)	T22797 MW - 4	Detection Limit	QC	%P	%EA	%IA
Naphthalene	ND	0.001	0.542	NR	NR	108
2-Methylnaphthalene	ND	0.001	0.486	NR	NR	97

ND = Not Detected

	% RECOVERY
2-Fluorophenol SURR	101
Phenol-d5 SURR	121
Nitrobenzene-d5 SURR	118
2-Fluorobiphenyl SURR	128
2,4,6-Tribromophenol SURR	107
Terphenyl-d14 SURR	103

METHODS: EPA 8270.

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

7/15/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 12, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

Analysis Date: 06/27/94
Sampling Date: 06/21-22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T22796	MW - 6	590	2.9	1,715	137	0
T22797	MW - 4	1,310	1.7	3,669	243	0
T22798	MW - 3	1,086	2.5	3,109	296	0
T22799	MW - 5	4,118	3.4	6,025	391	0
T22800	MW - 7	2,901	1.5	5,359	264	0
T22801	OCD - 7	1,825	2.5	4,416	581	0
T22802	OCD - 5	4,679	0.9	4,187	254	0
T22803	OCD - 3	5,194	0.8	4,095	254	0
T22804	OCD - 1	2,667	6.6	5,106	677	0
QC	Quality Control	510	1.0	10	---	---
% Precision		98	99	95	99	99
% Extraction Accuracy		101	115	94	---	---
% Instrument Accuracy		102	96	95	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

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

7/15/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
NAVAJO REFINING

July 12, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 07/05/94
Sampling Date: 06/21-22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T22796	MW - 6	1.4	111.4	318.2	543.6
T22797	MW - 4	42.6	149.2	450.3	1,057
T22798	MW - 3	7.6	187.0	451.6	996.6
T22799	MW - 5	18.7	473.1	434.6	4,287
T22800	MW - 7	7.3	250.4	479.9	3,006
T22801	OCD - 7	5.8	281.8	727.2	2,345
T22802	OCD - 5	43.1	310.3	774.1	2,963
T22803	OCD - 3	43.9	367.9	1,051	2,886
T22804	OCD - 1	8.6	245.4	699.0	2,577
QC	Quality Control	98.9	20.7	20.1	
Detection Limit		0.1	0.1	0.05	0.1
% Precision		101	102	103	106
% Extraction Accuracy		93	106	108	111
% Instrument Accuracy		99	104	100	99

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

7/15/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 12, 1994
Receiving Date: 06/23/94
Sample Type: Water
Project No: Semi-Annual Evap Ponds
Project Location: NA (Wells)

Analysis Date: 07/05/94
Sampling Date: 06/21-22/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	As (ppm)	Cr (ppm)	Ni (ppm)	Pb (ppm)
T22796	MW - 6	0.192	0.012	0.002	0.001
T22797	MW - 4	0.541	0.096	0.051	0.002
T22798	MW - 3	0.209	0.013	0.011	0.003
T22799	MW - 5	0.050	0.014	0.018	0.005
T22800	MW - 7	0.061	0.004	<0.001	0.003
T22801	OCD - 7	0.256	0.001	0.017	0.001
T22802	OCD - 5	0.038	0.001	0.031	0.005
T22803	OCD - 3	0.001	0.004	0.014	0.001
T22804	OCD - 1	0.048	<0.001	0.047	0.004
QC	Quality Control	0.099	0.040	0.100	0.0505
Detection Limit		0.001	0.001	0.001	0.001
% Precision		102	100	102	100
% Extraction Accuracy		111	82	86	94
% Instrument Accuracy		99	92	100	101

METHODS: EPA 239.2, 206.2, 218.2, 249.2.
TOTAL METALS QC: Blank Spiked with 0.100 ppm As, Ni; 0.050 ppm Cr, Pb.

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

7/15/94
Date

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: DARRELL MOORE
Phone #: 505-748-3311
FAX #: 505-748-9077
Company Name & Address: Navajo Refining Co.
Project #: Semi-Annual Evap Ponds (wells)
Project Name :
Project Location:
Sampler Signature: Darrell Moore

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME
22796	MW-6	4		X							X			6/21/94	10:45
22797	MW-4	4		X							X			" "	13:10
22798	MW-3	3		X							X			" "	13:40
22799	MW-5	3		X							X			" "	14:00
22800	MW-7	3		X							X			" "	14:20
22801	OCD-7	3		X							X			" "	14:40
22802	OCD-5	3		X							X			6/22/94	10:00
22803	OCD-3	3		X							X			" "	10:20
22804	OCD-1	3		X							X			" "	10:40

ANALYSIS REQUEST

BTEX, MTBE	TPH	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI	See List
								X

SPECIAL HANDLING

Turn around # of days	Fax ASAP	Report TWC direct	Hold

Relinquished by:	Date:	Times:	Received by:
Darrell Moore	6/22/94	16:30	
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

REMARKS MW-6 & MW-4 are analyzed for naphthalene and mononaphthalene. Samples caught 6/21/94 were kept on ice.

NAVAJO REFINING COMPANY

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

TELEPHONE
(505) 748-3311

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

August 23, 1994

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504

RE: 2nd Quarter 1994 Report on RO Reject Water, Navajo Refining Co.,Eddy County, NM

Dear Roger,

Enclosed are the results of our quarterly sampling of the RO reject water in addition to the bi-weekly analysis that you have not received. This water is being put on our farm and into Eagle Draw. For this sampling period we discharged a total of 49,361,300 gallons. This is broken down as follows: 11,700,006 gallons discharged to Eagle Draw and 37,661,294 gallons discharged to the farm. Since we started discharging the RO reject water we have discharged a total of 193,180,596 gallons. This is broken down as follows: 37,908,703 gallons have been put into Eagle Draw and 155,271,893 gallons have been put on the farm.

In the future, we will hold all bi-weekly analysis and send it when the quarterly results are sent. This should cut down on the amount of work each of us have to do.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

Darrell Moore

Darrell Moore
Environmental Specialist

encl.
cc:USEPA

6701 Aberdoen Avenue
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ANALYTICAL RESULTS FOR
NAVAJO REFINING
Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia

Analysis Date: 08/01/94
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Qtrly

PARAMETERS (mg/L)	T24162 RO Reject Qtrly	QC	%P	%EA	%IA
Phenol	0.133	0.790	94	90	99
NO3-N	2.10	0.98	98	90	98
COD	29	122	123	115	98
NH3	0.07	0.96	100	129	95
CN-	<0.02	0.02	100	130	100
BOD	<3	220	97	---	110
TSS	<1	---	105	---	---
pH (s.u.)	7.3	7.0	100	---	100
TDS	3,139	---	100	---	---
EC (uMHOs/cm)	3,302	1,486	100	---	105
Chlorine	<0.1	---	100	---	---
Fecal Coliform (s.u.)	Not Found	---	---	---	---

*NR = Not Run

Methods: EPA 600/8-78-017, 330.1, 120.1, 160.1, 150.1, 160.2, 405.1, 335.2, 350.3, 410.4, 353.3, 420.2.

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

8-19-94
DATE

NAVAJO REFINING **PAGE 3 of 3**
Qtrly RO Reject

EPA 624 Compounds (ppb)	T24162 RO Reject Qtrly	Detection Limit	QC	%P	%EA	%IA
1,3-Dichloropropane	ND	10				
Ethyl methacrylate	ND	10				
1,2,3,5-Diepoxybutane	ND	20				
1,2-Dibromoethane	ND	0.1				
2-Picoline	ND	1				
1,1,1,2-Tetrachloroethane	ND	1				
1,2,3-Trichloropropane	ND	1				
Isopropylbenzene	ND	1				
Bromobenzene	ND	1				
n-Propylbenzene	ND	1				
2-Chlorotoluene	ND	1				
4-Chlorotoluene	ND	1				
1,3,5-Trimethylbenzene	ND	1				
Pentachloroethane	ND	0.1				
1,2,4-Trimethylbenzene	ND	1				
tert-Butylbenzene	ND	1				
Benzyl chloride	ND	5				
sec-Butylbenzene	ND	1				
Isopropyl toluene	ND	1				
n-Butylbenzene	ND	1				
1,3-Dichloro-2-propanol	ND	5				
1,2-Dibromo-3-chloropropane	ND	5				
1,2,3-trichlorobenzene	ND	10				
Naphthalene	ND	1				
1,2,4-trichlorobenzene	ND	10				
Hexachlorobutadiene	ND	10				

	% RECOVERY
1,2-Dichloroethane-d4 SURR	95
Toluene-d8 SURR	97
4-Bromofluorobenzene SURR	97

***ND = Not Detected**
METHODS: EPA 624.

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

8-19-94
DATE

NAVAJO REFINING
Qtrly RO Reject

EPA 624 Compounds (ppb)	T24162 RO Reject Qtrly	Detection Limit	QC	%P	%RA	%IA
Dibromochloromethane	ND	1	52			104
Tetrachloroethene	ND	2	53			106
Chlorobenzene	ND	1	53	95	100	106
Ethylbenzene	ND	0.5	53			106
m & p-Xylene	ND	0.5	110			110
Bromoform	ND	1	53			106
Styrene	ND	0.5	52			104
o-Xylene	ND	0.5	54			108
1,1,2,2-Tetrachloroethane	ND	1	54			108
1,4-Dichloro-2-butene	ND	5	50			100
1,4-Dichlorobenzene	ND	2	50			100
1,3-Dichlorobenzene	ND	2	50			100
1,2-Dichlorobenzene	ND	2	50			100
Acentonitrile	ND	30				
Acetone	ND	10				
3-Chloropropionitrile	ND	10				
Ethanol	ND	50				
Acrylonitrile	ND	30				
Allyl chloride	ND	5				
Methyl tert-Butyl Ether	ND	10				
Propionitrile	ND	5				
Allyl alcohol	ND	50				
Propargyl alcohol	ND	30				
Methacrylonitrile	ND	10				
1,2-Dichloroethene	ND	10				
2,2-Dichloropropane	ND	10				
Isobutyl alcohol	ND	50				
1,1-Dichloropropene	ND	10				
2-Hydroxypropionitrile	ND	20				
Acrolein	ND	30				
2-Chloroethyl vinyl ether	ND	10				
Dibromomethane	ND	0.1				
1,4-Dioxane	ND	1				
Methyl methacrylate	ND	10				
2-Chloroethanol	ND	50				
Epichlohydrin	ND	10				
Pyridine	ND	30				

6701 Aberdeen Avenue
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ANALYTICAL RESULTS FOR
NAVAJO REFINING
Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/10/94
Sampling Date: 07/29/94
Sample Condition: I & C
Sample Received by: BL
Project Name: Qtrly RO Reject

EPA 624 Compounds (ppb)	T24162 RO Reject Qtrly	Detection Limit	QC	%P	%EA	%IA
Dichlorodifluoromethane	ND	1	50			100
Chloromethane	ND	1	48			96
Vinyl chloride	ND	2	47			94
Bromomethane	ND	1	55			110
Chloroethane	ND	1	51			102
Trichlorofluoromethane	ND	1	55			110
1,1-Dichloroethene	ND	2	52	99	102	104
Iodomethane	ND	1	53			106
Carbon disulfide	ND	1	59			118
Methylene chloride	ND	1	51			102
trans-1,2-Dichloroethene	ND	1	51			102
1,1-Dichloroethane	ND	1	49			98
Vinyl acetate	ND	1	54			108
2-Butanone	ND	20	55			110
Chlororform	ND	1	50			100
1,1,1-Trichloroethane	ND	1	50			100
1,2-Dichloroethane	ND	2	52			104
Benzene	ND	0.2	57	93	104	114
Carbon Tetrachloride	ND	10	57			114
1,2-Dichloropropane	ND	2	56			112
Trichloroethene	ND	2	52	97	86	104
Bromodichloromethane	ND	1	55			110
cis-1,3-Dichloropropene	ND	2	59			118
4-Methyl-2-pentanone	ND	10	53			106
trans-1,3-Dichloropropene	ND	2	55	95	104	110
Toluene	ND	0.5	53			106
1,1,2-Trichloroethane	ND	1	54			108
2-Hexanone	ND	10	52			104

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

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/02/94
Sampling Date: 07/29/94
Sample Condition: I & C
Sample Received by: BL
Project Name: RO Reject Qtrly

ORGANOCHLORINE INSECTICIDES (ug/L)	T24162 RO Reject Qtrly	Detection Limit	QC	%P	%EA	%IA
a-BHC	ND	0.0001	0.0020	96	110	100
b-BHC	ND	0.0001	0.0020	100	100	100
g-BHC	ND	0.0001	0.0020	100	100	100
s-BHC	ND	0.0001	0.0020	95	110	100
Heptachlor	ND	0.0001	0.0020	95	105	100
Aldrin	ND	0.0001	0.0020	89	115	100
Heptachlor epoxide	ND	0.0001	0.0020	91	115	100
Endosulfan-1	ND	0.0001	0.0020	88	120	100
Endosulfan-2	ND	0.0001	0.0020	93	102	100
DDE	ND	0.0001	0.0020	90	110	100
Dieldrin	ND	0.0001	0.0020	90	110	100
Endrin	ND	0.0001	0.0020	95	105	100
DDD	ND	0.0001	0.0020	95	95	100
Endrin Aldehyde	ND	0.0005	0.0020	100	80	100
Endosulfan Sulphate	ND	0.0005	0.0020	89	115	100
DDT	ND	0.0001	0.0020	97	90	100
Methoxychlor	ND	0.0005	0.0020	98	95	100
PCB's	ND	0.0001	0.0053	NR	NR	105
Chlordane	ND	0.0002	0.0001	102	95	100
Toxaphene	ND	0.005	0.0101	101	104	101

ND = Not Detected

METHODS: EPA 608.

8-19-94

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

DATE

6701 Aberdeen Avenue
Lubbock, Texas 79424
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FAX 806•794•1298

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

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Location: Artesia, NM
Analysis Date: 08/09/94

T24162
RO Reject

EPA 625 (ppm)	DL	Qtrly	QC	%P	%EA	%IA
N-Nitrosodimethylamine	0.001	ND	0.494			99
Phenol	0.001	ND	0.501	98	119	100
bis(2-Chloroethyl)ether	0.005	ND	0.480			96
2-Chlorophenol	0.005	ND	0.518	98	117	104
1,3-Dichlorobenzene	0.001	ND	0.504			101
1,4-Dichlorobenzene	0.001	ND	0.511	104	135	102
1,2-Dichlorobenzene	0.001	ND	0.514			103
bis(2-chloroisopropyl)ether	0.005	ND	0.429			86
n-Nitrosodi n propylamine	0.001	ND	0.533	101	123	107
Hexachloroethane	0.001	ND	0.532			106
Nitrobenzene	0.001	ND	0.456			91
Isophorone	0.005	ND	0.466			93
2-Nitrophenol	0.005	ND	0.428			86
2,4-Dimethylphenol	0.005	ND	0.436			87
bis(2-Chloroethoxy)methane	0.001	ND	0.442			88
2,4-Dichlorophenol	0.005	ND	0.455			91
1,2,4-Trichlorobenzene	0.001	ND	0.445	104	129	89
Naphthalene	0.001	ND	0.450			90
Hexachlorobutadiene	0.001	ND	0.471			94
4-Chloro-3-methylphenol	0.005	ND	0.467	97	128	93
Hexachlorocyclopentadiene	0.001	ND	0.517			103
2,4,6-Trichlorophenol	0.005	ND	0.449			90
2-Chloronaphthalene	0.001	ND	0.485			97
Dimethylphthalate	0.001	ND	0.478			96
Acenaphthylene	0.001	ND	0.474			95
2,6-Dinitrotoluene	0.001	ND	0.460			92
Acenaphthene	0.001	ND	0.479	102	108	96
2,4-Dinitrophenol	0.005	ND	0.442	98	115	88
4-Nitrophenol	0.005	ND	0.421	97	67	84
2,4-Dinitrotoluene	0.001	ND	0.481	98	115	96

NAVAJO REFINING

August 19, 1994

T24162
RO Reject

EPA 625 (ppm)	DL	Qtrly	QC	%P	%EA	%IA
Fluorene	0.001	ND	0.474			95
Diethylphthalate	0.001	ND	0.492			98
4-Chlorophenyl-phenylether	0.001	ND	0.518			104
4,6-Dinitro-2-methylphenol	0.001	ND	0.481			96
n-Nitrosodiphenylamine	0.001	ND	0.036			104
Diphenylhydrazine	0.005	ND	0.480			96
4-Bromophenyl-phenylether	0.001	ND	0.493			99
Hexachlorobenzene	0.001	ND	0.479			96
Pentachlorophenol	0.005	ND	0.485	101	128	97
Phenanthrene	0.001	ND	0.495			99
Anthracene	0.001	ND	0.475			95
Di-n-butylphthalate	0.001	ND	0.481			96
Fluoranthene	0.001	ND	0.500			100
Benzidine	0.01	ND	0.374			75
Pyrene	0.001	ND	0.477	101	125	95
Butylbenzylphthalate	0.001	ND	0.456			91
Benz[a]anthracene	0.001	ND	0.433			87
3,3-Dichlorobenzidine	0.001	ND	0.417			83
Chyrsene	0.001	ND	0.444			89
bis(2-Ethylhexyl)phthalate	0.001	ND	0.455			91
Di-n-octlphthalate	0.001	ND	0.490			98
Benzo[b]fluoranthene	0.001	ND	0.427			85
Benzo[k]fluoranthene	0.001	ND	0.390			78
Benzo[a]pyrene	0.001	ND	0.468			94
Indeno[1,2,3-cd]pyrene	0.001	ND	0.336			67
Dibenz[a,h]anthracene	0.001	ND	0.403			81
Benzo[g,h,i]perylene	0.001	ND	0.403			81

ND = Not Detected

	% RECOVERY
2-Fluorophenol SURR	92
Phenol-d5 SURR	106
Nitrobenzene-d5 SURR	112
2-Fluorobiphenyl SURR	96
2,4,6-Tribromophenol SURR	85
Terphenyl-d14 SURR	101

METHODS: EPA 625.

BS

8-19-94

Director, Dr. Blair Leftwich
Dr. Bruce McDonell

DATE

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
NAVAJO REFINING

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: NA

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 08/05-12/94
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Qtrly

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T24162	RO Reject Qtrly	3.10	161.5	460.2	135.6
QC	Quality Control	104.6	19.64	20.07	20.0
Detection Limit		0.1	0.1	0.05	0.1
% Precision		100	102	101	101
% Extraction Accuracy		107	98	101	101
% Instrument Accuracy		105	99	101	99

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

8-19-94
Date

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

August 4, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/01/94
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Qtrly

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T24162	RO Reject Qtrly	237	2.4	2,078	311	0
QC	Quality Control	497	1.0	10	---	---
% Precision		100	100	102	100	100
% Extraction Accuracy		95	106	120	---	---
% Instrument Accuracy		99	100	101	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

BB

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

8-19-94
Date

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ANALYTICAL RESULTS FOR
NAVAJO REFINING

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 08/04-12/94
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Qtrly

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T24162	RO Reject Qtrly	<0.001	0.1	0.08	<0.01	<0.01	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05
QC	Quality Control	0.049	5.1	4.88	5.29	5.20	0.104	0.98	0.010	5.10	5.09	5.15
DETECTION LIMIT		0.001	0.05	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.05
% Precision		98	102	99	102	100	98	100	100	101	101	99
% Extraction Accuracy		90	105	92	102	101	100	100	100	101	103	104
% Instrument Accuracy		94	104	98	110	108	104	98	100	106	105	106

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T24162	RO Reject Qtrly	<0.05	<0.05	0.14	0.01	0.2	<0.05	<0.05	<0.05	<0.5
QC	Quality Control	4.82	4.84	5.23	5.25	5.0	5.21	5.18	5.20	10.0
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5
% Precision		93	99	99	102	100	99	100	101	95
% Extraction Accuracy		88	98	103	101	91	98	100	98	100
% Instrument Accuracy		96	98	109	107	100	105	107	107	106

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cr, Cd, Ba, Ni, Be, V, B, Cu, Fe, Zn, Al, Co, Mn, Mo; 0.050 ppm Pb; 0.100 ppm Se, Ag; 0.010 ppm Hg; 9.8 ppm U.

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

8-19-94
DATE

6701 Aberdeen Avenue
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ANALYTICAL RESULTS FOR
NAVAJO REFINING
Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

August 19, 1994
Receiving Date: 08/01/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/12/94
Sampling Date: 07/29/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	FIELD CODE	TOTAL RADIUM 226/228 (pci/liter) (3+\-1)
T24162	RO Reject Qtrly	<1
Detection Limit		1

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

8-19-94
DATE

TRACEANALYSIS, INC.
A Laboratory for Advanced Environmental Research and Analysis

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

May 23, 1994
Receiving Date: 05/17/94
Sample Type: Water
Project No: NA
Project Location: NA

Analysis Date: 05/22/94
Sampling Date: 05/16/94
Sample Condition: Intact & Cool
Sample Received by: JC
Project Name: Reverse Osmosis Reject Water

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Ni (ppm)	Be (ppm)	V (ppm)	B (ppm)
T21443	RO Reject Bi-Weekly	<0.1	<0.1	<0.05	<0.01	<0.01	<0.2	<0.01	<0.05	<0.05	<0.05	0.06
QC	Quality Control	5.0	5.1	101	1.0	4.9	1.07	4.95	5.1	5.1	4.6	5.1
DETECTION LIMIT		0.1	0.1	0.05	0.01	0.01	0.2	0.01	0.05	0.05	0.05	0.05
% Precision		100	100	100	100	100	100	100	100	100	100	92
% Extraction Accuracy		103	101	106	100	98	96	94	100	96	99	99
% Instrument Accuracy		100	101	101	100	98	107	99	102	102	92	102

TA#	FIELD CODE	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)	Hg (ppm)
T21443	RO Reject Bi-Weekly	<0.05	0.15	0.03	0.2	<0.05	<0.05	<0.05	<0.5	<0.001
QC	Quality Control	4.95	5.07	5.0	4.8	5.0	5.0	5.0	10.1	0.020
DETECTION LIMIT		0.05	0.05	0.01	0.1	0.05	0.05	0.05	0.5	0.001
% Precision		100	100	100	97	100	100	100	100	100
% Extraction Accuracy		94	100	104	96	95	100	99	95	100
% Instrument Accuracy		99	101	100	96	100	100	100	103	100

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm As, Se, Mo, Cr, Zn, Cd, Pb, Ni, Be, Fe, Co, Mn, V, Cu, Ag; 100.0 ppm Ba; 10.0 ppm Al, B; 10.1 ppm U; 0.020 ppm Hg.

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

5-23-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
NAVAJO REFINING

May 23, 1994
Receiving Date: 05/17/94
Sample Type: Water
Project No: NA
Project Location: NA

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 05/22/94
Sampling Date: 05/16/94
Sample Condition: Intact & Cool
Sample Received by: JC
Project Name: Reverse Osmosis Reject Water

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T21443	Bi-Weekly RO Reject	3.2	166	450	143
QC	Quality Control	96	21.3	20.7	20.6
Detection Limit		1.0	1.0	1.0	1.0
% Precision		99	99	96	100
% Extraction Accuracy		92	110	109	102
% Instrument Accuracy		96	107	104	103

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

5-23-94
Date

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

May 23, 1994
Receiving Date: 05/17/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 05/19/94
Sampling Date: 05/16/94
Sample Condition: Intact & Cool
Sample Received by: JC
Project Name: Reverse Osmosis Reject Water

TA#	Field Code	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaC03) HC03	C03
T21443	RO Reject Bi-Weekly	262	2.5	1,314	351	0
QC	Quality Control	491	1.0	20	---	--
% Precision		97	99	99	99	--
% Extraction Accuracy		97	93	108	---	--
% Instrument Accuracy		100	99	98	---	--
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2, 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

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

5-23-94
Date

TRACE ANALYSIS, INC.
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ANALYTICAL RESULTS FOR
NAVAJO REFINING

June 22, 1994
Receiving Date: 06/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 06/14/94
Sampling Date: 06/09/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	ALKALINITY (mg/L as CaCo3) C03	CN- (mg/L)
T22220	RO Reject Bi-Wkly	221	2.05	1,747	317	0	<0.01
QC	Quality Control	505	1.01	19.7	---	---	0.102
% Precision		100	100	99	100	100	100
% Extraction Accuracy		98	94	122	---	---	97
% Instrument Accuracy		101	99	96	---	---	101
DETECTION LIMIT		1	0.1	1	10	---	0.01

METHODS: EPA 375.4, 310.1, 340.2, 335.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

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

6/22/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
NAVAJO REFINING

June 22, 1994
Receiving Date: 06/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 06/17/94
Sampling Date: 06/09/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T22220	RO Reject Bi-Wkly	4.8	80.5	154.0	111.7
QC	Quality Control	98.8	19.98	19.55	21.3
Detection Limit		0.1	0.1	0.05	0.1
% Precision		101	98	99	99
% Extraction Accuracy		102	105	97	109
% Instrument Accuracy		99	100	98	107

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

6/22/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

June 22, 1994
Receiving Date: 06/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

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

Analysis Date: 06/17/94
Sampling Date: 06/09/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T22220	RO Reject Bi-Wkly	<0.1	<0.1	<0.05	< 0.01	<0.01	<0.2	2.65	<0.001	<0.05	<0.05	<0.05
QC	Quality Control	4.98	4.9	206.5	5.02	5.07	5.04	9.74	0.020	5.18	5.00	4.89
DETECTION LIMIT		0.1	0.1	0.05	0.01	0.01	0.2	0.01	0.001	0.05	0.05	0.05
% Precision		100	98	98	100	102	101	100	100	101	100	100
% Extraction Accuracy		94	93	107	86	88	100	89	100	94	98	93
% Instrument Accuracy		100	98	103	100	101	101	97	100	104	100	98

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T22220	RO Reject Bi-Wkly	0.05	<0.05	0.55	0.01	0.49	<0.05	0.53	<0.05	<0.5
QC	Quality Control	5.58	5.24	5.18	4.83	5.53	4.69	4.84	5.00	9.9
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.1	0.05	0.05	0.05	0.5
% Precision		101	100	101	100	102	100	99	100	99
% Extraction Accuracy		107	99	94	93	104	86	101	100	94
% Instrument Accuracy		112	105	104	97	111	94	97	100	101

METHODS: EPA 200.7, 245.1.
QC: Blank Spiked with 5.0 ppm Pb, As, Cd, Cr, Se, Be, V, B, Cu, Zn, Al, Co, Mn, Mo, Ni; 200 ppm Ba; 10.0 ppm Ag; 0.020 ppm Hg; 9.8 ppm U.

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

6/22/94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 25, 1994
Receiving Date: 06/30/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 07/11/94
Sampling Date: 06/29/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: RO Reject BiWkly

TOTAL METALS

TA#	FIELD CODE	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)	B (ppm)	Cu (ppm)	Fe (ppm)
T23038	RO Reject Bi-Wkly	<0.1	<0.05	<0.01	<0.01	<0.001	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05
QC	Quality Control	5.12	107.2	5.12	5.06	0.02	5.16	5.13	5.08	4.92	5.04	5.11
DETECTION LIMIT		0.1	0.05	0.01	0.01	0.001	0.05	0.01	0.05	0.05	0.05	0.05
% Precision		99	99	100	100	100	100	100	101	99	100	100
% Extraction Accuracy		98	113	91	90	100	95	95	95	90	95	94
% Instrument Accuracy		102	107	102	101	100	103	103	102	98	101	102

TA#	FIELD CODE	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)	Pb (ppm)	Se (ppm)	Ag (ppm)
T23038	RO Reject Bi-Wkly	<0.01	0.11	<0.05	<0.05	<0.05	<0.5	<0.001	<0.001	<0.001
QC	Quality Control	5.16	1.00	5.07	5.05	5.14	9.8	0.0505	0.088	0.088
DETECTION LIMIT		0.01	0.08	0.05	0.05	0.05	0.5	0.001	0.001	0.001
% Precision		100	109	100	100	100	100	100	96	98
% Extraction Accuracy		94	94	92	93	94	96	94	96	96
% Instrument Accuracy		103	100	101	101	103	100	101	88	88

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cd, Cr, Ni, Be, V, B, Cu, Fe, Zn, Co, Mn, Mo; 100 ppm Ba; 0.020 ppm Hg; 1.00 ppm Al; 9.8 ppm U; 0.050 ppm Pb; 0.100 ppm Se, Ag.

BS

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

7-25-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 25, 1994
Receiving Date: 06/30/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 06/30/94
Sampling Date: 06/29/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: RO Reject BiWkly

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T23038	RO Reject Bi-Wkly	253	2.4	2,916	338	0
QC	Quality Control	510	2.03	11	---	---
% Precision		100	96	98	100	100
% Extraction Accuracy		102	87	110	---	---
% Instrument Accuracy		99	96	96	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

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

7-25-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 25, 1994
Receiving Date: 06/30/94
Sample Type: Water
Project No: NA
Project Location: NA

Analysis Date: 07/11/94
Sampling Date: 06/29/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: RO Reject BiWkly

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T23038	RO Reject BiWkly	3.2	248.7	585.7	145.8
QC	Quality Control	97.3	22.3	20.6	20.5
Detection Limit		0.1	0.1	0.05	0.1
% Precision		103	100	101	101
% Extraction Accuracy		106	92	88	98
% Instrument Accuracy		97	111	103	102

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

BL

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

7-25-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

July 25, 1994
Receiving Date: 07/20/94
Sample Type: Water
Project No: NA
Project Location: NA

Analysis Date: 07/21/94
Sampling Date: 07/19/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: NA

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T23726	RO Reject Bi-Wkly	218.3	2.59	1,772	323	0
QC	Quality Control	496	1.03	9.3	---	---
% Precision		100	100	98	100	---
% Extraction Accuracy		96	112	107	---	---
% Instrument Accuracy		100	100	92	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; SM 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 1.0 mg/L FLUORIDE; 10.0 mg/L SULFATE.

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

7/25/94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

August 2, 1994
Receiving Date: 07/20/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/01/94
Sampling Date: 07/19/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: RO Reject Bi-Wkly

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T23726	RO Reject Bi-wkly	<0.001	<0.1	0.10	<0.01	0.01	<0.001	<0.001	<0.001	<0.05	<0.01	<0.05
QC	Quality Control	0.048	4.8	5.16	4.82	4.83	0.098	0.095	0.020	5.04	4.94	4.94
DETECTION LIMIT		0.001	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.05
% Precision		102	99	100	99	99	93	101	100	99	101	99
% Extraction Accuracy		94	95	100	89	91	92	100	100	98	93	98
% Instrument Accuracy		97	97	103	96	97	98	95	100	101	99	99

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T23726	RO Reject Bi-wkly	0.06	<0.05	<0.05	0.01	<0.08	<0.05	<0.05	<0.05	<0.5
QC	Quality Control	5.41	4.98	5.00	5.09	5.08	4.76	4.92	4.82	10.20
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5
% Precision		101	101	100	100	101	100	99	99	101
% Extraction Accuracy		106	99	100	94	102	90	92	91	100
% Instrument Accuracy		108	100	100	102	102	95	98	96	104

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cd, Cr, Ni, Be, V, B, Cu, Fe, Zn, Co, Mn, Mo; 0.050 ppm Pb; 100 ppm Ba; 0.100 ppm Se, Ag; 0.020 ppm Hg; 1.00 ppm Al; 9.8 ppm U.

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

8-2-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

August 2, 1994
Receiving Date: 07/20/94
Sample Type: Water
Project No: NA
Project Location: RO Reject Bi-Wkly

Analysis Date: 08/01/94
Sampling Date: 07/19/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: RO Reject Bi-Wkly

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T23726	RO Reject Bi-Wkly	3.3	140.2	399.3	133.0
QC	Quality Control	104.2	20.2	19.6	20.7
Detection Limit		0.1	0.1	0.05	0.1
% Precision		98	100	103	100
% Extraction Accuracy		106	104	111	100
% Instrument Accuracy		104	101	98	104

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

8-2-94
Date

e Demos: Page 4

Cake baker: Page 5

A DAILY PRESS

Published Sunday, Tuesday Through Friday PRICE: Daily 25¢ — Sunday 50¢ THURSDAY

6-30-94

Navajo: No plan to tap into city sewer

By DARRELL J. PEHR
Daily Press Editor

Navajo Refining officials are working to come up with an alternative way to handle wastewater from the plant, but they told city councilors Wednesday that there is no plan to use the city's sewer system.

David Griffin, supervisor of environmental affairs at Navajo, told city councilors Jose Aguilar, Nadine Copeland and Manuel Barragan that the refinery "has studied what it would take to treat our water (to be acceptable to be sent to the city's wastewater treatment plant) and we just can't get there."

Griffin spoke at a public meeting conducted by Navajo at the Artesia Public Library as part of the refinery's community relations plan, required by the Environmental Protection Agency (see related story).

The refinery is under an EPA mandate to close the series of evaporation ponds it has used for decades to dispose of wastewater. The ponds are near the Pecos River and have been declared a hazardous waste facility by the EPA because the ponds at one point contained hazardous levels of benzene. Those levels have been greatly reduced, but the EPA's designation is permanent.

As a result, the refinery must close the ponds in two and a half years, and in the meantime, find an alternative way of dealing with its wastewater.

Councilors had asked Griffin whether refinery officials intended to tie into the city's existing wastewater system or if they would work with the city on a new city wastewater plant.

Griffin said the city's current wastewater plant is able to handle normal waste but is not capable of handling Navajo's wastes. City planner John Brown told councilors that the city, too, must meet EPA requirements on wastewater and so cannot accept water that it cannot adequately prepare for discharge to the river.

"If we take any water that will diminish the quality of the water that we send to the river ... then our (EPA) permit's in jeopardy," he said.

Since a Feb. 8 agreement, the city has been accepting some wastewater from the refinery, but officials said the level is limited to 900 gallons an hour. The water apparently is fairly clean and is being monitored by Navajo and city workers. Griffin said that agreement was made to give the refinery some "shelter" from regulatory agencies' requirements.

Griffin said efforts already have been made to reduce wastewater at the refinery from 1,000,000 gallons a day two years ago to the present 400,000 gallons. He expects additional efforts to reuse water will cut that figure to 200,000 gallons a day. Options being considered for the wastewater include injecting the water in deep wells; treating the water sufficiently so it can be used for farming; building an up-to-standards evaporation pond; or installing a high-tech reverse osmosis-type procedure that recovers 98.5 percent of the water.

Griffin said an investigation was done in 1985 and again recently into the feasibility of constructing a wastewater treatment facility for Navajo, but the technology needed to treat the water to the standards required to safely return the water to the river is "very, very expensive."

Wednesday's meeting focused on the investigations Navajo has commissioned on its evaporation ponds, the three-mile ditch that leads to the ponds (and has since been replaced with a pipeline) and the truck bypass landfarm, another wastewater facility at the plant.

Griffin reported that three studies done by outside consultants on the wastewater situation have cost Navajo about $1 million. Copies of all the reports, as well as reports done by Navajo staff members, are available for public review at the Artesia Public Library.

Griffin reported that the refinery had as many as six evaporation ponds in place at a time, covering about 100 acres, but now has closed all but three. He said the ponds haven't had any significant impact on the environment, and pointed out that migratory birds use one of the ponds as a nesting site.

Although some materials have percolated through the unlined ponds over the years, there are no hazardous materials at the ponds or leaking from them, said Griffin.

The refinery's community relations plan requires two public meetings a year. Navajo officials said the next meeting will be sometime in the fall. The meeting will be announced in the newspaper and a meeting notice will be posted at the library.

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Navajo negotiating $7 million fine with Justice Department

By DARRELL J. PEHR
Daily Press Editor

Negotiations are under way between Navajo Refinery and the U.S. Justice Department in a $7 million suit over the refinery's handling of hazardous materials.

At a public meeting Wednesday at

The fine is tied to handling of hazardous waste.

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Griffin pointed out that the refin-

benzene in December 1991, and he said Navajo failed to notify EPA.

"That's why EPA and the Justice Department is levying the fine against Navajo," he said.

Mayer said surprise inspections by the EPA in March 1992, the Oil Conservation Division a few weeks later

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6-30-94

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The refinery's community relations plan requires two public meetings a year. Navajo officials said the next meeting will be sometime in the fall. The meeting will be announced in the newspaper and a meeting notice will be posted at the library.

Navajo negotiating $7 million fine with Justice Department

By DARRELL J. PEHR
Daily Press Editor

Negotiations are under way between Navajo Refinery and the U.S. Justice Department in a $7 million suit over the refinery's handling of hazardous materials.

At a public meeting Wednesday at the Artesia Public Library (see related story), Navajo Superintendent of Environmental Affairs David Griffin reported that the fine was "the opening offer" from the Environmental Protection Agency and Justice Department after hazardous levels of benzene were found in an evaporation pond operated by Navajo.

Griffin told those at the meeting that evaporation ponds east of the refinery had been receiving waste containing benzene at 1.2 parts per million for years. EPA decided to lower the standards in 1990 to just .5 parts per million and Navajo began taking steps to achieve the lower standard.

"Not all our efforts were successful," said Griffin, and for some time after the EPA cut-off of November 1990, the levels of benzene reaching the ponds were higher than allowed.

"That's the $7 million fine," said Griffin. He added that while Navajo reported the situation to the state, reports were not made to the EPA.

Of the fine, Griffin said, "It seems excessive to us." He said negotiations are still under way to settle the issue. The amount of the fine that ultimately will be paid, if any, apparently is still at issue.

> The fine is tied to handling of hazardous waste.

Griffin pointed out that the refinery has achieved a level of just one part per *billion* of benzene for the past two and a half years at the ponds.

Rich Mayer, EPA environmental engineer, hazardous waste materials, in Dallas, Texas, said Navajo has had a three-mile ditch running from the refinery to a series of evaporation ponds near the Pecos River for more than 50 years, handling oily water. He said the ditch was closed in 1987 and replaced by an underground pipeline.

In 1989, Mayer said Navajo applied for a hazardous materials permit. As part of the permitting process, the refinery was required to investigate the ditch, ponds and the truck bypass landfarm, another treatment facility that is located at the refinery.

The permit also requires that Navajo have public meetings twice a year to inform the public of the progress of the investigations.

He said EPA is requiring Navajo to close ponds because they are contaminating groundwater in the area.

Mayer confirmed that Navajo's own tests detected the high levels of benzene in December 1991, and he said Navajo failed to notify EPA.

"That's why EPA and the Justice Department is levying the fine against Navajo," he said.

Mayer said surprise inspections by the EPA in March 1992, the Oil Conservation Division a few weeks later and the state Environment Department in May 1992 also detected high levels of benzene.

Mayer said EPA probably will have Navajo sample the Pecos River for traces of benzene. In the meantime, Navajo has two and a half years to find another way to handle wastewater.

"Navajo's required to find a treatment system to handle their waste and to close their lagoons down," said Mayer. The refinery is then to treat what's left in the ponds, remediate the soils at the ponds and monitor the groundwater.

"EPA feels it's time to stop the contamination," he said.

Both Griffin and Mayer said there have been no moves by EPA to suggest that the refinery be closed because of the waste situation.

"I think EPA is going to work with the refinery," said Mayer.

local topic in a letter to the editor today, which brings to mind a con-

Thanks again to the writers on the Commentary Page today.

Grown-ups and children enjoy ACT's 'Gumdrops'

By HELEN PETERS
Special to the Daily Press

The Artesia Community Theatre proved that kid stuff isn't just for kids. From the response at the opening performance of "Marmalade Gumdrops" last Saturday morning, it was clear that the grown-ups in the audience enjoyed the game of imagination played out on the stage as much as the children.

Of course, that has a lot to do with the zippy fast-paced production under the direction of Vicki Apodaca, and the considerable talents of the cast.

Daniel Russell, twentysomething going on a believable 10; Glenn Collier with an English accent to match his Gov. Winthrop desk, and a roar worthy of any Lion of the Imagination; Eugene Irby's Chair and Ringmaster; Janet Daugherty's napprone though stylish Bed; Regina Garner's knowledgable Bookcase; Nanisa Pereles' Lamp and Time Machine; and Jerri Cowan's Mother with the authorative voice, kept the play moving and the interest high.

Andy Barrett added color with appropriate and well-timed sound effects.

The combined audience for Saturday and Sunday's performances numbered more than 100 — half of which were children. It must have been satisfying for the cast to see the audience respond to the play's "participation theatre" spots with enthusiasm indeed.

The one sad note is that not every youngster in town could see the show. Wonder if there's any "angel" out there in the form of the Board of Education or the Artesia Arts Council who could get the wheels rolling for productions in the elementary schools — oh, well, just a thought.

The central idea of Marmalade Gumdrops that "imagination is like a marmalade gumdrop; once you've tasted it, you'll never settle for just one," can be used to describe the Artesia Community Theatre's productions. Once you've seen one, you'll never settle for just that. Speaking of which — don't forget to watch for the annual Melodrama which will be staged soon.

The people who put on the productions deserve our thanks. It's a commitment on everyone's part who participates, in whatever capacity — and our community is richer for their efforts.

(EDITOR'S NOTE: Helen Peters is an Artesia writer.)

Tour.

Assigned to cover the tour, I traveled with James and Terry Maupin because, like me, they were only going as far as Hope and Pinon.

After the festivities at Pinon came to a close, James was invited to visit James Ray Evrage's ranch in the spirit of neighbor visiting with neighbor. Now, when a rancher invites you to visit his place, he means his pastures, cows, watering holes and sheep, all of which are his pride and joy and rightfully so.

When we first arrived at the ranch, James Ray told us to wait a second because he had to feed a newborn calf, who was a mother-rejected half of a set of twins. Terry got the duty of lifting the reluctant brown animal to its feet. After Terry's son Jeremy fed it milk, the calf took a liking to Terry and followed him around the yard, obviously looking for a few more sips of milk, but Terry didn't oblige.

For our tour, we climbed into an aging ranch pickup, with James Maupin riding in the cab. Terry and I, with 7-year-old Jeremy between us, climbed into the back and sat on a tool box across the back cab window.

So, with fresh cold colas in one hand — Jeremy was sipping a root beer — and with the other hand gripping the bars along the truck for safety, we set off with thoughts of a great adventure stamped in smiles across our faces.

In between our admiring the beautiful land and the hard work James Ray had put into the spread, we began a game of who could spot the various animals, plants and other oddities.

First, we spotted a refrigerator that looked like a tornado had embedded it into the ground with the door facing up. After concluding in our urban-way of thinking that James Ray must keep cool ones easily available in the fridge while working, we were informed the appliance keeps the water valves for the watering

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Public Forum 7-24-94

Let Navajo deal with own waste

TO THE EDITOR:

Citizens of Artesia, this is a wake-up call. I just couldn't believe the article in the Artesia Daily Press June 30, 1994.

Our friends at Navajo would have us believe that they have no intention of hooking into our wastewater system. Come on, how dumb do you think we are ... 900 gallons an hour, just how much do you have to dump on us before you are using our system?

I would like to make it clear, I have nothing against Navajo at all. I have many friends and neighbors who work there. I just don't believe that Navajo is all that keeps Artesia going and they certainly are not the only ones that pay taxes in Artesia.

Why not do a study to see how many people in Artesia are retired on a fixed income? How many people work in other business offices, stores and other places that have no connection to Navajo. You never hear about all of the people who work and make their living here, send our kids to school and pay their share of the taxes. I'd be willing to bet they outnumber the workers at Navajo. Do they not count for anything?

Does anyone in Artesia know how many people on the city council either work for Navajo or have worked for them? Maybe it would be wise to check it out.

Then (city councilors) want to put another ⅛-cent tax on the people for a new wastewater plant. I think we the people of Artesia are taxed enough. And I don't think we the people should pay for something we don't need. But is it just something that is wanted, by whom?

Friends and neighbors, I think we need to wake up if we don't want our water more messed up than it is now.

I believe Navajo needs their own wastewater system. Why should we pay for their mess? Why can't they clean up their own mess? ...

I believe we should be trying to figure out a way to solve our own water problems (and we do have a problem) instead of trying to solve Navajo's problem.

Thank you,
Vera Austin

Lawmakers

N.M. SENATE DISTRICT 32
TIMOTHY Z. JENNINGS (D)
In Roswell: P.O. Box 1797, Roswell, N.M. 88202, 623-8331, 623-9378.

Today in History

By The Associated Press

Today is Sunday, July 24, the 205th day of 1994. There are 160 days left in the year. Today's highlight in history:

Twenty-five years ago, on July 24, 1969, the Apollo 11 astronauts — two of whom had been the first men to set foot on the moon — splashed down safely in the Pacific.

On this date:

In 1783, Latin American revolutionary Simon Bolivar was born in Caracas, Venezuela.

In 1847, Mormon leader Brigham Young and his followers arrived at Great Salt Lake City in Utah.

In 1862, the eighth president of the United States, Martin Van Buren, died in Kinderhook, N.Y.

In 1866, Tennessee became the first state to be readmitted to the Union after the Civil War.

In 1929, President Hoover proclaimed the Kellogg-Briand Pact, which renounced war as an instrument of foreign policy.

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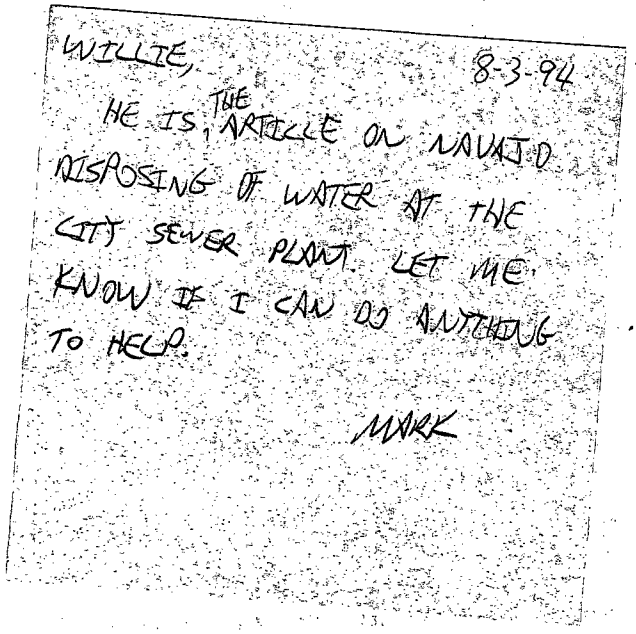

WILLIE, 8-3-94

HE IS, THE ARTICLE ON NAVAJO DISPOSING OF WATER AT THE CITY SEWER PLANT. LET ME KNOW IF I CAN DO ANYTHING TO HELP.

MARK

REFINING COMPANY

TELEPHONE
(505) 748-3311

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

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

February 25, 1994

Robert L. Myers II
Petroleum Engineering Specialist
Oil Conservation Division-Environmental Bureau
P.O. Box 2088
State Land Office Bldg.
Santa Fe, NM 87504

RE: Discharge Plan GW-28 Navajo Refining, Eddy County, New Mexico

Dear Mr. Myers:

Enclosed are Navajo's responses to your letter of November 9, 1993. We regret the delay in responding to this request. Your comments are listed below with Navajo's response in bold type.

A. Discharge Plan (and modifications) Reporting Requirements:

1. Annual Sampling of the pipeline effluent for BTEX, major cations/anions, fluoride,WQCC metals and PAH's.
   This sampling was done on January 12, 1994 and the results were forwarded to OCD.
2. Annual split sampling (with OCD) of monitoring wells for water level, pH and conductivity from field measurements, and for BTEX, major cations/anions and fluoride from laboratory analysis. Monitor wells MW-4 and MW-6 will also be analyzed for naphthalene and mononaphthalene.
   This sampling was done December 20, 1993 and the report sent to OCD on January 12, 1994. Our understanding, based on OCD's letter of October 21, 1991, is that these wells are on a staggered schedule with basically half of the wells done in January and half in June, except that MW-4 and MW-5 are monitored semiannually.
3. Semi-annual monitoring of wells MW-4 and MW-5 for water level, pH and conductivity from field measurements, and for BTEX, major cations/anions and fluoride from laboratory analysis;
   See #2 above.
4. Quarterly sampling of the RO reject water for those constituents listed in the 4/27/93 discharge plan modification (and amended fluoride standard-OCD 6/29/93);

The RO reject water was sampled for the quarterly constituents on January 12, 1994. Those results were forwarded to OCD.

5. Bi-weekly sampling of the Reverse Osmosis (RO) reject water for major cations/anions and heavy metals (request with OCD to relax this to quarterly based on analysis results);
This sampling is being done on a bi-weekly basis with results forwarded to OCD as they are received. Navajo still believes that there is no analytical reason for continuing the bi-weekly sampling of this reject water. The results have been consistent with very little fluctuation.

6. Daily monitoring and recording of the pipeline effluent discharge flow quantities;
Navajo is monitoring the RO reject effluent to Eagle Draw and our farm on a daily basis but we are not aware of any requirement to monitor the pipeline effluent. The RO reject flow is reported quarterly when the quarterly RO samples are reported.

7. Copies of all reports and correspondence with EPA and NMED referencing refinery SWMU's.
The SWMU's that the refinery is aware of are the Truck-By-Pass Landfarm, the Evaporation Ponds and Three Mile Ditch. All reports and correspondence with EPA and NMED concerning these units would cover several shelves. Navajo would like to suggest that you come to the refinery and go over these volumes and decide what you think is important. We could then make copies of those select documents. You could do this at the next quarterly sampling when we split samples. If you do want the complete list, Navajo will send that.

B. Unresolved Questions Based on File Review

1. What is the progress status of the closure of the oil and tank bottoms in the earthen sludge pit adjacent to Tank 835?
We are currently working the pit and recovering product using a contractor, Talon Industries. However, the cold weather has hampered the progress. The pit is approximately 85% completed.

2. A time table for the completion of integrity testing of all below grade waste piping was to be submitted after verification, which was submitted in February, 1991. The timetable is to be submitted and testing performed prior to renewal of the current discharge plan, which expires October 21, 1996. This is to include the three mile long effluent pipeline from the main refinery complex to the disposal ponds.
It is Navajo's understanding that this request is limited to piping and sewers over 25 years old. The only piping or sewers that are over 25 years old are in the North Plant. Navajo will evaluate and test these sewers as needed to accomplish the task by 10/21/96. Also, Navajo will test the effluent pipeline to the ponds before the October 21, 1996 deadline.

3. What is the progress status of closure of Pond #1?
The soil in pond #1 is being turned over regularly by trac-hoes belonging to Sweat Construction and contracted to Navajo. In addition, the pond is tilled on a regular basis. These measures enhance biological activity

and at this time approximately 80% of the pit is degraded with patches in the corners needing additional attention. Navajo estimates the remaining 20% of the pit will require 6 months to a year to be completed. EPA has requested a more structured closing of the pond and we have also done additional testing of the TPH in the pond #1 soils at EPA's request.

4. Has the catchment and drainage for tanks 130, 132, 133, and 135 been installed as per the drawings submitted to OCD in July 1990?
The catchment and drainage for these tanks was never installed. These tanks are not in use now and they will be removed in the near future.

C. Cleanup and Containment Needs

1. The muratic acid saddle tank and the oil /water drum in the Asphalt Loading Area need cleaned up and contained.
The muratic acid tank has not been used for several years and is on schedule to be taken out and disposed of. The drums at the Asphalt Loading Rack are used to hold discarded test asphalt and any spills in the area that are picked up. Navajo's position on these barrels is that since they contain asphalt, no containment is warranted. However, we will be happy to work with OCD on this question.
2. Transfer pumps and open drums containing oil at the Asphalt Tank Farm need cleaned up and contained.
Again, these pumps and drums are used to hold and move asphalt which is used to pave roads. Navajo feels no containment is needed. Again, we would be glad to discuss this with you.
3. Pumps at the South Plant Cooling Tower area, and transfer pumps and spills throughout the Vacuum Tower area need cleaned up and contained. The diesel saddle tank in this area needs cleaned up and curbs added to pad to contain spills. Drip trays for pumps and compressors should be monitored and drained before they spill over.
Navajo will schedule these through our maintenance department to be taken care of.
4. At the South Plant Water Treating Area, numerous pump pads need cleaned up and leaks contained, and spill trays are overflowing.
These will be taken care of as #3 above.
5. The pad containing treatment chemicals at the South Plant Distillation Tower needs some type of containment to prevent leaks or spills from running off the pad.
This area contains I-pac containers which are on cement without lips. Lips will be added to the pad.
6. The area north of the Distillation Tower has contaminated soils which need to be cleaned up and the source determined.
Navajo will clean up the soil and determine the source of the contamination.
7. The old oil/water Separator in the South Plant should be closed out.
Talon Industries, which is the company that is cleaning the pit at Tank 835,

will move to this separator when the pit at 835 is finished. This pit has heavy oil in it which will be recovered and put back through our processes. Navajo would like to keep this separator available for future use. Therefore, we would like to refrain from closing it at this time.

8. Drums in the Product Tank Farm need to be contained and empty drums stored properly.
   This is being taken care of plant wide as part of our Storm Water Pollution Prevention Plan (SWPPP).
9. Cleanup and improved containment is needed for the Hazardous Waste Press storage area for the temporary storage of the hazardous waste drums.
   The plate press is no longer here at the refinery and the area referenced has been cleaned up. As for the barrels you referred to, Navajo has never stored hazardous waste in drums. These are probably the chemicals that were used by the plate press which are polymers used in the dewatering process. These are also cleaned up.
10. The area around the frac tanks storing sludge needs cleaned up and leaks contained.
    This was taken care of and the waste that was picked up was put in a roll-off bin and sent for incineration.
11. The chemical additive saddle tanks in the Gasoline Loading Area need cleaned up and leaks contained.
    Navajo agrees and will comply.
12. Leaks from the pumps in the Reverse Osmosis Unit are overflowing the pads.
    See #11 above.
13. The compressor dryers in the North Plant Process Area need to be cleaned up and containment installed.
    Navajo agrees and containment will be installed.
14. Drums placed throughout the North Plant Process Area to capture drips need to be emptied before they overflow.
    This is being taken care of as part of our SWPPP.
15. Soils under the FCC Area pipes and valves just north of the cooling tower need to be cleaned up.
    This area has been targeted to be cleaned and paved as part of our Storm Water Pollution Prevention Plan (SWPPP).
16. The pump building in the tank farm area at the northwest end of the facility needs cleaned up and containment installed for the pumps sitting on gravel. Also, the drums at this site should be placed on containment.
    Our maintenance department will schedule this area for clean-up and the drums will be taken care of under the SWPPP.
17. The transfer pumps west of the tank farm need containment.
    Navajo agrees and this will be scheduled.
18. The Truck Loading Area, the Rail Loading Area and the Diesel Tank Transfer Area all need cleaned up and containment.

The Truck Loading Area and Rail Loading Area have containment and those drawings are enclosed. The day before this inspection, we had a spill at the Rail Loading Rack and that has been cleaned up.

19. The storage tanks around the Maintenance Shop need surrounding soils cleaned up and leaks contained.
This will be cleaned up. These units are not storage tanks, but clay filters for the product in the adjacent tank farm.

D. Cleanups Around Tanks

The Following tanks (by area) were noted to have excessive spillage and/or oil-stained soils around the structures, valves and transfer pumps, and may also need improved containment for the overflow sumps.
-Tanks 132, 133, and 135
-Tanks 417 and 418
-Tanks 110, 411 and 438
-Tanks 437 and 439
-Tank 54
-Tank 810
-Tank 838
These will be cleaned up.

E. Annual Inspections for Below-Grade Sumps and Tanks

During the May 1993 OCD inspection, it was noted that numerous below-grade sumps and tanks were not equipped with secondary containment or leak detection. Navajo should submit a method(s) and schedule for testing the integrity of ALL sumps and tanks. If any of the sumps or tanks require replacement in the future, or new ones are installed, leak detection must be integrated into the design. The particular sumps and tanks identified during the inspection include:
-Asphalt Loading Area loading pad sump,
-South Plant TCC Tower sumps,
-South Plant Water Treating Area sumps,
-South Plant Distillation Tower sump,
-Tank sumps at the tank farm north of the South Plant,
-Product Tank Farm Tank 110 sump and Tank 438 below-grade tank,
-North Plant Process Area sumps,
-FCC Area Wastewater Separator below-grade tank,
-Northwest tank farm pump house sumps,
-Rail Loading Area sump,
-Diesel Tank 837 below-grade tank,
-Below-grade separator north of Tank 838, and
-Maintenance Shop sumps.
Due to my inexperience in the refinery when this inspection took place, I misidentified several sewer boxes as sumps when Bill Olson asked me about them. Of the above mentioned locations, only the Asphalt Loading Area, tank farm North of the South Plant, Tank 110, Tank 438, Northwest tank farm Slinger House, Rail Loading Area, Tank 837, and Tank 838 actually have sumps. The other "sumps" are actually sewer boxes. Navajo will test

these sumps and tanks by filling with water and checking levels over a 24 hour period to see if it falls. This will be done as needed to accomplish by October 21, 1996.

F. Truck By-Pass Landfarm

Roger Anderson has confirmed the verbal permission for the one-time disposal of cooling tower sludge from the Lovington refinery at the Truck-By-Pas Landfarm. However, my file review shows no record of this landfarm being permitted to accept any wastes, whether from the Artesia refinery or the Lovington refinery. In order to bring this landfarm into compliance with WQCC regulations, Navajo shall submit an application to modify Discharge Plan GW-28 to include operation of this landfarm. This application shall include:

1. Initial date of operation of the landfarm;
2. An inventory of all wastes placed on the landfarm, including origin, quantity and date of emplacement of each batch, and records of any tests confirming the non-hazardous nature of each batch;
3. A description of the landfarming procedures being practiced, including spreading rates, lift thicknesses and discing frequencies; and
4. Results of any monitoring data to demonstrate that contaminants are not migrating from the landfarm area.

To assist in the submittal of this application, I have enclosed a copy of OCD's Guidelines for Permit Application, Design, and Operation of Centralized & Commercial Landfarms.

Navajo is in the process of contracting with Waste Management in Rio Rancho to take our non-hazardous waste and landfill it. This should be accomplished by the end of March and further use of the Truck-By-Pass-Landfarm will be discontinued. We will continue to fertilize and disc the landfarm but no additional waste will be applied. For your information, EPA is investigating the Truck-By-Pass Landfarm as part of our RFI into the ponds and ditch. We have done sampling and verification sampling on this unit during the last 6 months.

I hope this adequately answers your concerns about the facility. We are working diligently on these matters and a lot of them dove-tail in with our SWPPP. If you have any questions, please feel free to call me at 748-3311. Thank you for your time in this matter.

Regards,

Darrell Moore

Darrell Moore
Environmental Specialist

encl.

U.S. Department of Transportation
Research and Special Programs Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

September 23, 1994

Certified Mail - Return Receipt Requested /P 324 956 796

Navajo Pipeline Company
P.O. Drawer 159
Artesia, NM 88210

Attention: Georgia Raga

Re: RSPA Tracking Numbers 380-383

Dear Ms. Raga:

Enclosed please find a corrected Page 29 (FRP Review Protocol No. 8.1, *Response Resources: Certification*) for the facility response plan review findings transmitted August 15, 1994 from the Research and Special Programs Administration (RSPA) for the sequence numbers referenced above. During our telephone discussion on September 21, it was confirmed that Navajo Pipeline Company submitted certification that it has obtained, "through contract or other approved means," sufficient private personnel and equipment to respond to a worst case discharge (49 CFR § 194.119(e)), as the enclosed replacement page indicates. Please disregard Page 29 from the Minimal Adequacy Review dated 8/11/94 and replace it with the enclosed.

I regret any inconvenience that this error may have caused and appreciate your patience. If you have any questions or reason to believe that other noted deficiencies are in error please contact me at (202) 366-8053.

Sincerely,

Christopher J. Hoidal, P.E.
Response Plans Officer

Enclosure

cc: Mr. Don Smith, Region VI, EPA
Mr. Steve Calanog, Region IX, EPA
Mr. Scott Benton, Texas General Land Office
Ms. Mary McDaniel, Railroad Commission of Texas
Mr. Roger Anderson, New Mexico Oil Conservation Division

Checklist: FRP Review Protocol No. 8.1
Response Resources: Certification
For Sequence Number: 0380, 0381, 0382, 0383

---

1. Does the FRP include certification that the operator has obtained, through contract or other approved means, the personnel and equipment to respond to a worst case discharge? (49 CFR § 194.119(e)) (Yes/No/NA): Yes

   Page Ref.:

   Comment:

2. Is the certification signed by the Qualified Individual, an appropriate corporate officer, or other person qualified to enter into contractual agreements? (49 CFR § 194.119(e)) (Yes/No/NA): Yes

   Page Ref.:

   Comment:

U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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Washington, D.C. 20590

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Mr. Roger Anderson
Environmental Bureau Chief
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

TELEPHONE
(505) 748-3311

EASYLINK
62905278

Navajo 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

'94 OCT 7 AM 8 52

October 3, 1994

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504

RE: 3rd Quarter 1994 Report on RO Reject Water, Navajo Refining Co.,Eddy County, NM

Dear Roger,

Enclosed are the results of our quarterly sampling of the RO reject water in addition to the bi-weekly analysis for this quarter. This water is being put on our farm and into Eagle Draw. For this sampling period we discharged a total of 11,914,778 gallons. This is broken down as follows: 5,681,741 gallons discharged to Eagle Draw and 6,233,037 gallons discharged to the farm. Since we started discharging the RO reject water we have discharged a total of 205,095,374 gallons. This is broken down as follows: 43,590,444 gallons have been put into Eagle Draw and 161,504,930 gallons have been put on the farm.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

Darrell Moore

Darrell Moore
Environmental Specialist

encl.
cc:USEPA

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia

Analysis Date: 08/01/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

PARAMETERS (mg/L)	T25716 RO Reject Qtrly.	QC	%P	%EA	%IA
Phenol	<0.002	0.39	100	81	100
NO3-N	0.83	1.09	90	110	110
COD	98	75	100	91	106
NH3	0.08	0.97	94	91	96
CN-	<0.02	0.05	100	98	100
BOD	<3	216	98	---	108
TSS	<1	---	98	---	---
pH (s.u.)	7.1	7.0	100	---	100
TDS	2,928	---	100	---	---
EC (uMHOs/cm)	3,102	1,367	99	---	97
Chlorine	0.1	---	100	---	---
Fecal Coliform (100mL)	Not Found	---	---	---	---

Methods: EPA 600/8-78-017, 330.1, 120.1, 160.1, 150.1, 160.2, 405.1, 335.2, 350.3, 410.4, 353.3, 420.2.

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

9-30-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/13/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T25716	RO Reject Qtrly.	<0.001	<0.1	0.09	<0.01	0.01	<0.001	0.012	<0.001	<0.05	<0.01	<0.05
QC	Quality Control	0.048	5.0	4.94	4.95	4.89	0.098	0.051	0.0051	4.92	4.92	5.06
DETECTION LIMIT		0.001	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.05
% Precision		94	98	100	98	98	93	100	104	97	99	98
% Extraction Accuracy		102	100	97	92	93	90	122	115	94	97	96
% Instrument Accuracy		103	100	101	101	101	98	98	102	101	101	102

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T25716	RO Reject Qtrly.	0.06	<0.05	0.11	0.05	0.28	<0.05	<0.05	<0.05	<0.5
QC	Quality Control	5.00	4.93	5.06	4.95	5.05	5.00	5.19	4.92	9.5
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5
% Precision		100	98	99	98	102	100	98	97	100
% Extraction Accuracy		100	94	94	94	101	93	96	94	89
% Instrument Accuracy		100	100	102	101	102	101	105	102	97

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cr, Cd, Ba, Ni, Be, V, B, Cu, Fe, Zn, Al, Co, Mn, Mo; 0.050 ppm Pb, Ag; 0.100 ppm Se; 0.0050 ppm Hg; 9.8 ppm U.

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

9-30-94
DATE

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/23/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	FIELD CODE	TOTAL RADIUM 226/228 (pci/liter)
T25716	RO Reject Qtrly.	<1
Detection Limit		1

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

9-30-94
DATE

TRACEANALYSIS, INC.
A Laboratory for Advanced Environmental Research and Analysis

6701 Aberdeen Avenue
Lubbock, Texas 79424
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ANALYTICAL RESULTS FOR
NAVAJO REFINING COMPANY
Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/16/94
Sampling Date: 09/09/94
Sample Condition: I & C
Sample Received by: McD
Project Name: NA

T25716
RO Reject
Qtrly.

EPA 624 Compounds (ppb)		Detection Limit	QC	%P	%EA	%IA
Dichlorodifluoromethane	ND	1	54			108
Chloromethane	ND	1	66			132
Vinyl chloride	ND	2	60			120
Bromomethane	ND	1	53			106
Chloroethane	ND	1	57			114
Trichlorofluoromethane	ND	1	51			102
1,1-Dichloroethene	ND	2	44	100	114	88
Iodomethane	ND	1	47			94
Carbon disulfide	ND	1	46			92
Methylene chloride	ND	1	53			106
trans-1,2-Dichloroethene	ND	1	46			92
1,1-Dichloroethane	ND	1	54			108
Vinyl acetate	ND	1	45			90
2-Butanone	ND	20	56			112
Chloroform	ND	1	53			106
1,1,1-Trichloroethane	ND	1	52			104
1,2-Dichloroethane	ND	2	53			106
Benzene	ND	0.2	55	100	110	110
Carbon Tetrachloride	ND	10	51			102
1,2-Dichloropropane	ND	2	54			108
Trichloroethene	ND	2	49	99	98	98
Bromodichloromethane	ND	1	49			98
cis-1,3-Dichloropropene	ND	2	42			84
4-Methyl-2-pentanone	ND	10	51			102
trans-1,3-Dichloropropene	ND	2	52	101	84	104
Toluene	ND	0.5	56			112
1,1,2-Trichloroethane	ND	1	52			104
2-Hexanone	ND	10	46			92

EPA 624 Compounds (ppb)	T25716 RO Reject Qtrly.	Detection Limit	QC	%P	%EA	%IA
Dibromochloromethane	ND	1	45			90
Tetrachloroethene	ND	2	50			100
Chlorobenzene	ND	1	57	99	110	114
Ethylbenzene	ND	0.5	54			108
m & p-Xylene	ND	0.5	109			109
Bromoform	ND	1	43			86
Styrene	ND	0.5	60			120
o-Xylene	ND	0.5	61			122
1,1,2,2-Tetrachloroethane	ND	1	47			94
1,4-Dichloro-2-butene	ND	5	48			96
1,4-Dichlorobenzene	ND	2	54			108
1,3-Dichlorobenzene	ND	2	54			108
1,2-Dichlorobenzene	ND	2	57			114
Acentonitrile	ND	30				
Acetone	ND	10				
3-Chloropropionitrile	ND	10				
Ethanol	ND	50				
Acrylonitrile	ND	30				
Allyl chloride	ND	5				
Methyl tert-Butyl Ether	ND	10				
Propionitrile	ND	5				
Allyl alcohol	ND	50				
Propargyl alcohol	ND	30				
Methacrylonitrile	ND	10				
1,2-Dichloroethene	ND	10				
2,2-Dichloropropane	ND	10				
Isobutyl alcohol	ND	50				
1,1-Dichloropropene	ND	10				
2-Hydroxypropionitrile	ND	20				
Acrolein	ND	30				
2-Chloroethyl vinyl ether	ND	10				
Dibromomethane	ND	0.1				
1,4-Dioxane	ND	1				
Methyl methacrylate	ND	10				
2-Chloroethanol	ND	50				
Epichlohydrin	ND	10				
Pyridine	ND	30				

NAVAJO REFINING COMPANY
Project Location: Artesia, NM

EPA 624 Compounds (ppb)	T25716 RO Reject Qtrly.	Detection Limit	QC	%P	%EA	%IA
1,3-Dichloropropane	ND	10				
Ethyl methacrylate	ND	10				90
1,2,3,5-Diepoxybutane	ND	20				100
1,2-Dibromoethane	ND	0.1				
2-Picoline	ND	1				
1,1,1,2-Tetrachloroethane	ND	1				
1,2,3-Trichloropropane	ND	1				
Isopropylbenzene	ND	1				120
Bromobenzene	ND	1				122
n-Propylbenzene	ND	1				94
2-Chlorotoluene	ND	1				96
4-Chlorotoluene	ND	1				103
1,3,5-Trimethylbenzene	ND	1				108
Pentachloroethane	ND	0.1				114
1,2,4-Trimethylbenzene	ND	1				
tert-Butylbenzene	ND	1				
Benzyl chloride	ND	5				
sec-Butylbenzene	ND	1				
Isopropyl toluene	ND	1				
n-Butylbenzene	ND	1				
1,3-Dichloro-2-propanol	ND	5				
1,2-Dibromo-3-chloropropane	ND	5				
1,2,3-trichlorobenzene	ND	10				
Naphthalene	ND	1				
1,2,4-trichlorobenzene	ND	10				
Hexachlorobutadiene	ND	10				
	% RECOVERY					
1,2-Dichloroethane-d4 SURR	108					
Toluene-d8 SURR	107					
4-Bromofluorobenzene SURR	107					

***ND = Not Detected**
METHODS: EPA 624.

Director, Dr. Blair Leftwich

9-30-94
DATE

Director, Dr. Bruce McDonell

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/12-13/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T25716	RO Reject Qtrly.	227.6	2.5	2,080	322.8	0
QC	Quality Control	492	0.98	9.6	---	---
% Precision		101	102	102	100	---
% Extraction Accuracy		94	104	90	---	---
% Instrument Accuracy		98	99	98	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 1.0 mg/L FLUORIDE; 10.0 mg/L SULFATE.

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

9-30-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/13/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T25716	RO Reject Qtrly.	3.7	188.3	523.2	146.0
QC	Quality Control	51.0	19.9	19.9	20.0
Detection Limit		0.1	0.1	0.05	0.1
% Precision		100	99	100	100
% Extraction Accuracy		109	97	94	102
% Instrument Accuracy		101	100	99	101

METHODS: EPA 200.7.
POTASSIUM SPIKE AND QC: Sample spiked with 29.4 mg/L POTASSIUM and Blank Spiked with 50.0 mg/L POTASSIUM.
MAGNESIUM SPIKE AND QC: Sample spiked with 194.2 mg/L MAGNESIUM and Blank Spiked with 20.0 mg/L MAGNESIUM.
CALCIUM SPIKE AND QC: Sample spiked with 361.6 mg/L CALCIUM and Blank Spiked with 20.0 mg/L CALCIUM.
SODIUM SPIKE AND QC: Sample spiked with 183.0 mg/L SODIUM and Blank Spiked with 20.0 mg/L SODIUM.

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

9-30-94
Date

6701 Aberdeen Avenue
Lubbock, Texas 79424
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FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Location: Artesia, NM
Analysis Date: 09/14/94

T25716
RO Reject

EPA 625 (ppm)	DL	Qtrly.	QC	%P	%EA	%IA
N-Nitrosodimethylamine	0.001	ND	0.471			94
Phenol	0.001	ND	0.483	100	76	97
bis(2-Chloroethyl)ether	0.005	ND	0.484			97
2-Chlorophenol	0.005	ND	0.506	100	88	101
1,3-Dichlorobenzene	0.001	ND	0.501			100
1,4-Dichlorobenzene	0.001	ND	0.493	100	108	99
1,2-Dichlorobenzene	0.001	ND	0.503			101
bis(2-chloroisopropyl)ether	0.005	ND	0.374			75
n-Nitrosodi-n-propylamine	0.001	ND	0.503	100	100	101
Hexachloroethane	0.001	ND	0.502			100
Nitrobenzene	0.001	ND	0.470			94
Isophorone	0.005	ND	0.467			93
2-Nitrophenol	0.005	ND	0.430			86
2,4-Dimethylphenol	0.005	ND	0.454			91
bis(2-Chloroethoxy)methane	0.001	ND	0.450			90
2,4-Dichlorophenol	0.005	ND	0.469			94
1,2,4-Trichlorobenzene	0.001	ND	0.476	99	110	95
Naphthalene	0.001	ND	0.456			91
Hexachlorobutadiene	0.001	ND	0.504			101
4-Chloro-3-methylphenol	0.005	ND	0.471	99	78	94
Hexachlorocyclopentadiene	0.001	ND	0.444			89
2,4,6-Trichlorophenol	0.005	ND	0.439			88
2-Chloronaphthalene	0.001	ND	0.465			93
Dimethylphthalate	0.001	ND	0.473			95
Acenaphthylene	0.001	ND	0.458			92
2,6-Dinitrotoluene	0.001	ND	0.432			86
Acenaphthene	0.001	ND	0.476	98	89	95
2,4-Dinitrophenol	0.005	ND	0.331			66
4-Nitrophenol	0.005	ND	0.293	99	80	59
2,4-Dinitrotoluene	0.001	ND	0.471	99	80	94

NAVAJO REFINING COMPANY

September 30, 1994

T25716

RO Reject

EPA 625 (ppm)	DL	Qtrly.	QC	%P	%EA	%IA
Fluorene	0.001	ND	0.470			94
Diethylphthalate	0.001	ND	0.472			94
4-Chlorophenyl-phenylether	0.001	ND	0.516			103
4,6-Dinitro-2-methylphenol	0.001	ND	0.343			69
n-Nitrosodiphenylamine	0.001	ND	100.02			100
Diphenylhydrazine	0.005	ND	0.451			90
4-Bromophenyl-phenylether	0.001	ND	0.527			105
Hexachlorobenzene	0.001	ND	0.522			104
Pentachlorophenol	0.005	ND	0.475	99	66	95
Phenanthrene	0.001	ND	0.520			104
Anthracene	0.001	ND	0.512			102
Di-n-butylphthalate	0.001	ND	0.496			99
Fluoranthene	0.001	ND	0.511			102
Benzidine	0.01	ND	0.211			42
Pyrene	0.001	ND	0.533	105	136	107
Butylbenzylphthalate	0.001	ND	0.496			99
Benz[a]anthracene	0.001	ND	0.439			88
3,3-Dichlorobenzidine	0.001	ND	0.362			72
Chyrsene	0.001	ND	0.453			91
bis(2-Ethylhexyl)phthalate	0.001	ND	0.467			93
Di-n-octiphthalate	0.001	ND	0.544			109
Benzo[b]fluoranthene	0.001	ND	0.417			83
Benzo[k]fluoranthene	0.001	ND	0.466			93
Benzo[a]pyrene	0.001	ND	0.472			94
Indeno[1,2,3-cd]pyrene	0.001	ND	0.355			71
Dibenz[a,h]anthracene	0.001	ND	0.333			67
Benzo[g,h,i]perylene	0.001	ND	0.349			70

ND = Not Detected

	% RECOVERY
2-Fluorophenol SURR	86
Phenol-d5 SURR	96
Nitrobenzene-d5 SURR	98
2-Fluorobiphenyl SURR	96
2,4,6-Tribromophenol SURR	82
Terphenyl-d14 SURR	118

METHODS: EPA 625.

Director, Dr. Blair Leftwich
Dr. Bruce McDonell

9-30-94
DATE

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/14/94
Sampling Date: 09/09/94
Sample Condition: I & C
Sample Received by: McD
Project Name: NA

ORGANOCHLORINE INSECTICIDES (mg/L)	T25716 RO Reject Qtrly.	Detection Limit	QC	%P	%EA	%IA
a-BHC	ND	0.0001	0.0040	99	100	100
b-BHC	ND	0.0001	0.0040	101	102	100
g-BHC	ND	0.0001	0.0040	99	100	100
s-BHC	ND	0.0001	0.0040	98	100	100
Heptachlor	ND	0.0001	0.0040	103	100	100
Aldrin	ND	0.0001	0.0040	107	95	100
Heptachlor epoxide	ND	0.0001	0.0040	105	97	100
Endosulfan-1	ND	0.0001	0.0040	105	100	100
Endosulfan-2	ND	0.0001	0.0040	101	100	100
DDE	ND	0.0001	0.0040	100	97	100
Dieldrin	ND	0.0001	0.0040	101	100	100
Endrin	ND	0.0001	0.0040	103	97	100
DDD	ND	0.0001	0.0040	101	95	100
Endrin Aldehyde	ND	0.0005	0.0040	109	95	100
Endosulfan Sulphate	ND	0.0005	0.0040	100	97	100
DDT	ND	0.0001	0.0040	104	100	100
Methoxychlor	ND	0.0005	0.0040	99	95	100
Total PCB	ND	0.0001	0.0049	101	80	96
Chlordane	ND	0.0002	0.0020	102	105	100
Toxaphene	ND	0.005	0.0200	94	103	100

ND = Not Detected

METHODS: EPA 608.

9-30-94

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

DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 12, 1994
Receiving Date: 09/10/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 09/10/94
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	Field Cod	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)	TOTAL BTEX (ppb)
T25717	RA-2723	<1	<1	<1	<1	<1	<1
QC	Quality Control	211	198	205	208	623	
Detection Limit		1	1	1	1	1	
% Precision		99	100	100	100	101	
% Extraction Accuracy		131	104	107	105	106	
% Instrument Accuracy		106	99	103	104	104	

METHODS: EPA SW 846-8020.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.

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

9-12-94
Date

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Darrell Moore
Phone #: 505-748 3311
FAX #: 505-748-9017

Company Name & Address: Navajo Refining Co

Project #:
Project Name :

Project Location: Artesia NM
Sampler Signature: Darrell Moore

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX, MTBE	TPH	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
25716	RO Reject Qtrly.	14		X						(3) X	2#1 X	(4) X	(3) X	9/9/94	13:30			See		List			
17	RA-2723	2		X							X	X		" "	14:00	X							

Relinquished by:	Date:	Times:	Received by:
Darrell Moore	9/9/94	16:30	
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory: 9/10/94

REMARKS Need more COC's

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Report TWC direct; Hold

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR NAVAJO REFINING

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

August 29, 1994
Receiving Date: 08/12/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/15/94
Sampling Date: 08/11/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Biwkly

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HC03	CO3
T24505	RO Reject Biwkly	222.9	2.5	1,577	323	0
QC	Quality Control	473	0.95	9.2	---	---
% Precision		100	100	98	100	---
% Extraction Accuracy		91	106	90	---	---
% Instrument Accuracy		95	96	91	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

BS

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

8-29-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
NAVAJO REFINING

August 29, 1994
Receiving Date: 08/12/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 08/25/94
Sampling Date: 08/11/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Biwkly

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T24505	RO Reject Biwkly	3.6	258	707	169.5
QC	Quality Control	100.9	20.2	19.39	19.0
Detection Limit		0.1	0.1	0.05	0.1
% Precision		96	97	100	100
% Extraction Accuracy		102	84	78	89
% Instrument Accuracy		101	101	97	95

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

8-29-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

August 29, 1994
Receiving Date: 08/12/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/25/94
Sampling Date: 08/11/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject BiWkly

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T24505	RO Reject Biwkly	<0.001	<0.1	0.15	<0.01	<0.01	<0.001	<0.001	<0.001	<0.05	<0.01	<0.01
QC	Quality Control	0.048	5.3	4.98	5.28	5.29	0.099	0.094	0.01	5.0	5.18	5.2
DETECTION LIMIT		0.001	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.01
% Precision		100	101	99	100	100	96	100	100	101	101	91
% Extraction Accuracy		104	100	89	99	100	92	108	100	98	99	79
% Instrument Accuracy		97	101	100	106	106	99	94	100	100	104	104

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T24505	RO Reject Biwkly	<0.05	<0.05	<0.05	0.01	<0.08	<0.05	<0.05	<0.05	<0.5
QC	Quality Control	4.85	5.08	5.2	5.10	4.8	5.0	5.3	5.23	10.4
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5
% Precision		99	100	100	99	100	100	100	101	101
% Extraction Accuracy		94	66	100	98	94	92	103	98	99
% Instrument Accuracy		97	102	104	102	96	100	106	105	106

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cd, Cr, Ni, Be, V, B, Cu, Fe, Zn, Co, Mn, Mo; 0.050 ppm Pb; 100 ppm Ba; 0.100 ppm Se, Ag; 0.020 ppm Hg; 1.00 ppm Al; 9.8 ppm U.

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

8-29-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 08, 1994
Receiving Date: 08/31/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

Analysis Date: 08/31/94
Sampling Date: 08/30/94
Sample Condition: Intact & Cool
Sample Received by: YL
Project Name: RO Reject BiWkly

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKALINITY (mg/L as CaCo3) HCO3	CO3
T25272	RO Reject BiWkly	218	2.5	2,830	346	0
QC	Quality Control	488	0.94	10	---	---
% Precision		100	100	106	100	100
% Extraction Accuracy		95	104	100	---	---
% Instrument Accuracy		98	95	100	---	---
DETECTION LIMIT		1	0.1	1	10	---

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.
QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

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

9-9-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

September 08, 1994
Receiving Date: 08/31/94
Sample Type: Water
Project No: NA
Project Location: NA

Analysis Date: 09/06/94
Sampling Date: 08/30/94
Sample Condition: Intact & Cool
Sample Received by: YL
Project Name: RO Reject BiWkly

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)
T25272	RO Reject BiWkly	3.6	186	523.1	132
QC	Quality Control	100.8	20.4	19.1	19.8
	Detection Limit	0.1	0.1	0.05	0.1
	% Precision	101	100	99	100
	% Extraction Accuracy	113	97	92	100
	% Instrument Accuracy	100	102	97	99

METHODS: EPA 200.7.
QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

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

9-9-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR

September 08, 1994
Receiving Date: 08/30/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

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

Analysis Date: 09/06/94
Sampling Date: 08/30/94
Sample Condition: Intact & Cool
Sample Received by: YL
Project Name: RO Reject BiWkly

TOTAL METALS

TA#	FIELD CODE	Pb (ppm)	As (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Se (ppm)	Ag (ppm)	Hg (ppm)	Ni (ppm)	Be (ppm)	V (ppm)
T25272	RO Reject BiWkly	<0.001	<0.1	0.10	<0.01	0.02	<0.001	<0.001	<0.001	<0.05	<0.01	<0.05
QC	Quality Control	0.048	5.1	5.20	4.93	5.22	0.095	0.099	0.010	5.00	4.95	5.05
DETECTION LIMIT		0.001	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.05
% Precision		100	96	100	96	100	100	99	100	96	98	94
% Extraction Accuracy		100	86	101	86	87	108	108	100	91	96	97
% Instrument Accuracy		96	100	104	98	101	95	99	100	99	100	100

TA#	FIELD CODE	B (ppm)	Cu (ppm)	Fe (ppm)	Zn (ppm)	Al (ppm)	Co (ppm)	Mn (ppm)	Mo (ppm)	U (ppm)
T25272	RO Reject BiWkly	0.28	<0.05	0.08	0.07	0.3	<0.05	<0.05	<0.05	<0.5
QC	Quality Control	6.06	4.96	5.19	4.94	5.7	5.20	4.96	5.19	9.9
DETECTION LIMIT		0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5
% Precision		101	94	97	96	103	95	96	97	106
% Extraction Accuracy		133	100	94	88	114	92	93	87	89
% Instrument Accuracy		121	98	102	98	108	101	98	101	100

METHODS: EPA 200.7, 239.2, 270.2, 272.2.
QC: Blank Spiked with 5.0 ppm As, Cr, Cd, Ba, Ni, Be, V, B, Cu, Fe, Zn, Al, Co, Mn, Mo; 0.050 ppm Pb; 0.100 ppm Se, Ag; 0.010 ppm Hg; 9.8 ppm U.

BL

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

9-9-94

DATE

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 1050	Date 9/17/94

Originating Party	Other Parties
Darrell Moore - Navajo Refining	Bill Olson - Envir Bureau

Subject

Spill at Navajo Artesia Refinery

Discussion

Spill of 100 bbls of crude oil from Tank 437
Tank drain left open
Fluid overflowed drain sump and spilled onto ground
Fluid contained within dike
Approx. 85 bbls recovered
Placed absorbent on ground surface to recover additional fluid
Will excavate contaminated soil. I requested final confirmation sampling of final excavated area.
Will ship offsite to Hazardous Disposal Facility

Conclusions or Agreements

He will take final confirmation samples for TPH, BTEX and submit to OCD for approval
He will submit written incident report to OCD within one week

Distribution

File
RCA

Signed Bill Olson

OIL CONSERV... REC...
...94 AM 8 52

TELEPHONE
(505) 748-3311

Navajo REFINING COMPANY

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

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

September 26,1994

Mr. Bill Olson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504

RE: SPILL AT TANK 437, NAVAJO REFINING CO., EDDY COUNTY, NEW MEXICO

Dear Bill,

Enclosed is the report for the spill at Tank 437 that I called you about on September 19, 1994. This spill has been cleaned up and the contaminated soil is being sent to USPCI's Lone Mountain landfill. A composite sample has been taken from the area and is being analyzed for BTEX and TPH. A final report will follow when lab results are finalized and will include a copy of each manifest from each load sent to Lone Mountain.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Sincerely,

Darrell Moore

Darrell Moore
Environmental Specialist

Encl.

SPILL REPORT (SR-1)
(5 bbl. or Greater)

1. Time of Spill 10:30 ~~PM~~ (AM)/PM Date 9-17-94

2. Time Spill Contained 10:30 (AM)/PM Date 9-17-94

3. Location of Spill 437 Tank ~~[illegible]~~ Water Sump

4. Type of Spill (Material) Crude

5. Quantity of Spill 140 bbl. Size of Spill (area) 25' x 30'

6. Disposition of Spilled Material Pumped back to API Seperator & Back to Crude tank

7. How was the Spill Contained Shut valve off & pumped out with pumper truck

8. Did spill get into any drainage ditch, creek, arroyo, river, or waste water stream? YES ☐ NO ☒

9. If yes, did the spill leave company property or right-of-ways?
YES ☐ NO ☒

10. Corrective action taken to prevent further spills: Make Sure drain valve is not left open while taking care of unit problems in Refinery

11. Name of person on duty at time of spill Felix Fierro Jr.

12. Physical location of responsible person at the time of spill N.P. working on Sour water Stripper transmitter & making rounds

13. Department Shift Foreman

14. Supervisor's Signature

- NOTE -

In order to comply with federal laws, the Navajo Refining Company must report all spills within 24 hours to the regional office of the EPA. This form must be filled out completely and returned to the office of the Chief Environmentalist whenever a spill occurs. If, due to location, you cannot return this form within 24 hours, call the information to the Chief Environmentalist Office and then forward the form.

Form SR-1 - 8-1-81

NAVAJO REFINING COMPANY

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

TELEPHONE
(505) 748-3311

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

August 16, 1994

RECEIVED
JUL 19 1994
OIL CONSERVATION DIV.
SANTA FE

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87501

RE: Modification to GW-28, Navajo Refining Co. Eddy County, New Mexico

Dear Roger,

In separate letters dated April 27, 1993 and July 25, 1994, OCD approved , with conditions, for Navajo Refining Company to discharge our RO reject water and our air stripped trench water to an adjacent farm that is owned by Navajo. This farm has been planted in rye and has used the water for a beneficial purpose.

Navajo is now seeking a modification to our discharge plan (GW-28) to allow us to discharge the above referenced waters to other farms that Navajo owns near our Artesia refinery. Those farms are shown on the enclosed map. In addition, we would like the option to build a holding tank on the west side of the farm so the farmer can use the water in a more controlled fashion. As you are aware, Navajo is actively pursuing options that will allow us to discontinue the use of the evaporation ponds in the near future. The recovered water from our trenches makes up approximately 20% or more of our total. Since this water can be put to beneficial use on these farms, we feel this is an excellent application for this resource.

Let me know if there is anything we can do to speed this process along. Thank you for your time in this matter.

Sincerely,

Darrell Moore

Darrell Moore
Environmental Specialist

Encl.

NAVAJO FARM
EAGLE DRAW
BOLTON ROAD
N. 5TH ST.
API SEPARATOR
AIR STRIPPER
Proposed Holding Tank
NAVAJO FARM
NAVAJO FARM
A. B. COLL
NAVAJO
NAVAJO FARM
A. B. COLL
A. B. COLL
A. B. COLL
M. CHASE
T. JOY
G. G. ARMSTRONG & SON
SECTION 8
SECTION 9
SECTION 10
SECTION 15
SECTION 16
SECTION 16
SECTION 17
U. S. HIGHWAY 82
FREEMAN AVENUE
CR 49A
RA-1090
RA-2568
AD-1917
AD-1908
AD-1923
KWB-2A
KWB-2B
LEGEND
MONITOR WELL
BORING LOCATION
WATER WELL - SHALLOW VALLEY FILL AQUIFER
WATER WELL - DEEP, ARRTESIAN AQUIFER
OIL/GAS EXPLORATION WELL CONVERTED TO WATER WELL
APPROXIMATE LOCATION OF BACK-FILLED DRAINAGE DITCH
SECTION CORNER
RA-397 STATE ENGINEER OFFICE WELL NUMBER, ROSWELL ARTESIAN BASIN
AD-1917 AGE OF WELL, RECORD ON FILE SEO, NO "RA" NUMBER ASSIGNED
N
S
E
W

NOTES	REFERENCE DRAWINGS	NO.	REVISIONS	BY	CHK.	DATE	APPR.	APPR.	NO.	REVISIONS	BY	CHK.	DATE	APPR.	APPR.

DRAWING TITLE

WELLS & BORING LOCATIONS IN & AROUND NAVAJO REFINING

NAVAJO REFINING CO.
ENGINEERING DEPARTMENT
P.O. DRAWER 159
ARTESIA, NEW MEXICO

DRAWN BY	CHK'D BY	SCALE	
PETE	DGM	1" = 300'	
DATE	APPR BY	DRAWING NUMBER	REV.
8-11-94		90-42-D	1

NAVAJO REFINING COMPANY

TELEPHONE
(505) 748-3311

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

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

August 16,1994

Mr. Chris Eustace
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87501

RE: Hydrotesting of Tank 835, Navajo Refining Co., Eddy County, New Mexico

Dear Chris,

Navajo Refining is in the process of working over our Tank 835 which was in crude service. This includes cleaning the inside of the tank by sandblasting, removing the old floor, and replacing the floor with new materials. This tank will be returned to JP-4 service so that Navajo can supply the Air Force's fuel needs in the coming exercises at Roswell. .

We will hydrotest this tank by filling it with approximately 54000 bbls. of well water. We would like to dispose of the water by discharging it to one of our adjacent farms. I have enclosed a map showing the location of our farms. Which farm the water will be applied to depends on the farmers needs. The water will be sampled and analyzed for volatiles, semi-volatiles and metals. We should be able to collect the sample by August 17 and get results to OCD by August 22. If at all possible, we would appreciate a responce on these results by August 24.

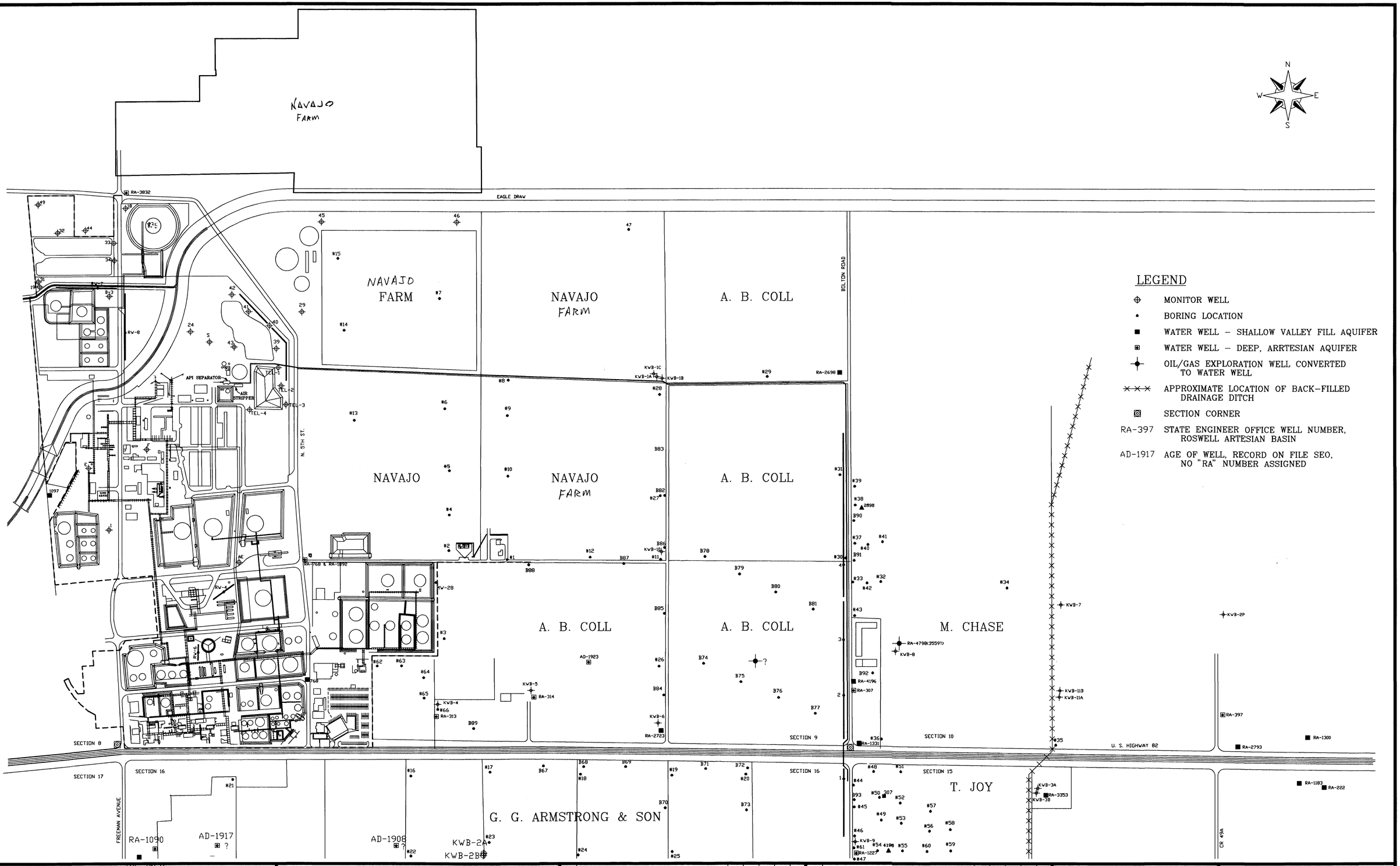
Your prompt attention to this matter will be greatly appreciated. If you have any questions, please call me or David Griffin at 748-3311. Thank you for your time.

Regards,

Darrell Moore

Darrell Moore
Environmental Specialist

Encl.



LEGEND

- ⊕ MONITOR WELL
- • BORING LOCATION
- ■ WATER WELL – SHALLOW VALLEY FILL AQUIFER
- ▣ WATER WELL – DEEP, ARRTESIAN AQUIFER
- ⊕ OIL/GAS EXPLORATION WELL CONVERTED TO WATER WELL
- ×-×-× APPROXIMATE LOCATION OF BACK-FILLED DRAINAGE DITCH
- ◎ SECTION CORNER
- RA-397 STATE ENGINEER OFFICE WELL NUMBER, ROSWELL ARTESIAN BASIN
- AD-1917 AGE OF WELL, RECORD ON FILE SEO, NO "RA" NUMBER ASSIGNED

NOTES

REFERENCE DRAWINGS

NO.	REVISIONS	BY	CHK.	DATE	APPR.	APPR.

NO.	REVISIONS	BY	CHK.	DATE	APPR.	APPR.

DRAWING TITLE

WELLS & BORING LOCATIONS IN & AROUND NAVAJO REFINING

NAVAJO REFINING CO.
ENGINEERING DEPARTMENT
P.O. DRAWER 159
ARTESIA, NEW MEXICO

DRAWN BY	CHK'D BY	SCALE	
PETE	DGM	1" = 300'	
DATE	APPR BY	DRAWING NUMBER	REV.
8-11-94		90-42-D	1

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

NMOCD Inter-Correspondence

To: Roger Anderson-Environmental Bureau Chief

From: Wayne Price-Environmental Engineer District I

Date: September 26, 1994

Reference: Navajo Refining Co.-Lea Refining DP-GW-14

Subject: **Disposal of non-exempt waste resulting from spill at tank 104B which contained AGO's.**

Comments:

Dear Roger,

Since the District handled this situation thur verbal communication with you and your staff and in keeping with NMOCD policy of all non-exempt waste dispositions and clean-up activities associated with discharge plan facilities are to be reviewed by your staff; I am therefore forwarding you the necessary chronological documentation for your review and files.

Since Navajo's Discharge Plan does not explicitly spell out this particular waste stream, we had requested Navajo to supply us this documentation. We also requested documentation for the results of the final clean-up activities.

Please find enclosed the following documentation for your files:

1. Fax dated Aug 12, 1994 "knowledge of process" letter and analytical results to support waste determination.

2. Wayne Price's field reports-2

3. Letter Dated September 7, 1994 from Darrell Moore Navajo's Environmental specialist to Wayne Price NMOCD District I Environmental Engineer. This letter provided information and manifest on the final disposition of the contaminated soil that was removed from the spill area and provided documentation in the form of analytical results on the remaining contaminants in the soil.

   Also included was Navajo's plans for future restoration of the effected area.

If you have any questions or need additional information please don't hesitate to call or write.

cc: Jerry Sexton-District I Supervisor

Attachments-3

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

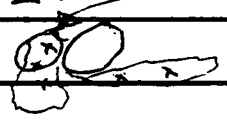
MEMORANDUM OF MEETING OR CONVERSATION

☐ Telephone ☒ Personal | Time ≈ 10:00 AM | Date 9/15/94

Originating Party	Other Parties
DARRELL MOORE -	
STEVE TERRY	

Subject: SAMPLING AT NAVAJO - LEA PLANT

Discussion: WITNESSED SAMPLES (COMPOSITE) AROUND 104R TANK - USUAL STAIN REMAINS



PID ≈ 40 PPM
NAVAJO WILL TEST for TPH!

Conclusions or Agreements: NAVAJO TO LET AREA AIR-OUT & THEN COVER!

Distribution

Signed

8/12/94

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

Name WAYNE PRICE Date _____ Miles _____ District I

Time of Departure 7 AM Time of Return 4 PM Car No. G 047

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature _____

INSPECTION	CLASSIFICATION	FACILITY	HOURS	QUARTER HOURS
M	O	O	2	-

NAVAJO ~~REF~~ LEA REFINERY - RAN TANK OVER - GAS-OIL TANK # 104B IN SOUTH TERMINAL TANK FARM

~~TEST~~ SPREADING CALACHIE FINES AROUND - WILL PICK UP MONDAY AND PUT IN ROLL-off CONTAINER -

NAVAJO PERSONNEL - STEVE TERRY, MIKE TRUELL

NAVAJO PROVIDED - ANALYTICAL WORK for "KNOWLEDGE of PROCESS".

CALLED SANTA Fe TO APPROVE PROCEDURE!

Mileage		Per Diem		Hours	
UIC		UIC		UIC	
RFA		RFA		RFA	
Other		Other		Other	

TYPE INSPECTION PERFORMED

H = Housekeeping
P = Plugging
C = Plugging Cleanup
T = Well Test
R = Repair/Workover
F = Waterflow
M = Mishap or Spill
W = Water Contamination
O = Other

INSPECTION CLASSIFICATION

U = Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)
R = Inspections relating to Reclamation Fund Activity
O = Other - Inspections not related to injection or The Reclamation Fund

E = Indicates some form of enforcement action taken in the field (show immediately below the letter U, R or O)

NATURE OF SPECIFIC WELL OR FACILITY INSPECTED

D = Drilling
P = Production
I = Injection
C = Combined prod. inj. operations
S = SWD
U = Underground Storage
G = General Operation
F = Facility or location
M = Meeting
O = Other

Navajo REFINING COMPANY

TELEPHONE
(505) 748-3311

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

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

September 7, 1994

Mr. Wayne Price
Oil Conservation Division
P.O. Box 1980
Hobbs, NM 88240

RE: SPILL AT TANK 104B, LEA REFINING CO., LEA COUNTY, NM

Dear Mr. Price,

Enclosed are the test results from the soil samples that were collected on August 18, 1994 around tank 104B at our Lovington facility. As you can see, this composite sample came back at 867 ppb or .8 ppm TRPHC. This area has been allowed to sit in the open air with the sun baking it for the last three weeks, so we feel very confident that no adverse environmental effects have or will occur.

We shipped six roll-off bins containing 211,980 lbs. of this material to USPCI's Lone Mountain facility in Waynoka, Oklahoma. I have enclosed the manifests from each of those shipments for your records.

We are going to go ahead and regrade the area of the spill with caliche and put the area back in shape for our operations. This should be accomplished in the next two weeks. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time in this matter.

Regards,

Darrell Moore

Darrell Moore
Environmental Specialist

Encl.

8701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

August 24, 1994
Receiving Date: 08/19/94
Sample Type: Soil
Project No: NA
Project Location: Lea Refining, Lovington

Analysis Date: 08/19/94
Sampling Date: 08/18/94
Sample Condition: Intact & Cool
Sample Received by: JW
Project Name: NA

TA#	FIELD CODE	TRPHC (ppb)
T24829	TK 104B Spill	867
QC	Quality Control	916
% Precision		96
% Instrument Accuracy		92
DETECTION LIMIT		10

METHODS: EPA Modified 8015.
TRPHC QC: Blank spiked with 1,000 ppb TRPHC.

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

8-24-94
DATE

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Darrell Moore
Phone #: 505-748-3311
FAX #: 505-748-9077

Company Name & Address: Navajo Refining

Project #:
Project Name :

Project Location: Lea Refining, Lovington
Sampler Signature: Darrell Moore

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX, MTBE	TPH	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI	ANALYSIS REQUEST
24829	TK 104B Spill	2			X							X		8/11/94	1000		X		Mod Pred 8015					

SPECIAL HANDLING
Turn around # of days
Fax ASAP
Report TWC direct
Hold

Relinquished by:	Date:	Times:	Received by:
Darrell Moore	8/11/94	16:30	
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

REMARKS
This is a composite sample.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description (*Including Proper Shipping Name, Hazard Class and ID Number*)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (*Including Proper Shipping Name, Hazard Class and ID Number*)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NMT360010367 — Manifest Document No. 00006

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: LEA REFINING CO. P.O. DRAWER 159 ARTESIA, N.M. 88210

4. Generator's Phone: (505) 748-3311

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: TRIAD Transport — 6. US EPA ID Number: OKD981588791

C. State Transporter's ID: 3405

D. Transporter's Phone: 918-426-4751

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: USPCI LOCEMT RT 2 BOX 174 WAYNOKA, OK. 73860 — 10. US EPA ID Number: OKD065438376

G. State Facility's ID: SD 47002

H. Facility's Phone: 405-697-3500

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON-HAZARDOUS WASTE, solid contaminated soil and special WASTE		001	CM	EST 30820	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: Conformation # 55702 — STREAM # LM94-0539 12.7y — SW 30160

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: 24hr. Phone # 505-748-3311

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR — Printed/Typed Name: Steve H TERRY — Signature — Month Day Year: 10/8/1994

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: X ROLAND C GREEN — Signature — Month Day Year: 10/8/1994

18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space: 94-7983

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Printed/Typed Name — Signature — Month Day Year: 10/11/94

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

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ORIGINAL - RETURN TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N.M.T.3.6.0.0.1.0.3.6.7 — Manifest Document No. 0.0.0.7

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: LEA REFINING CO. P.O. DRAWER 159 ARTESIA, N.M. 88210

A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone (505) 748-3311

5. Transporter 1 Company Name: TRIAD TRANSPORT — 6. US EPA ID Number: O.K.D.9.8.1.5.8.8.7.9.1

C. State Transporter's ID: 3405

D. Transporter's Phone: 918-426-4751

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: USPCI LANDFILL RT 2 BOX 170 WAYNOKA, OK. 73860 — 10. US EPA ID Number: O.K.D.0.6.5.4.3.4.3.7.6

G. State Facility's ID: SD 47002

H. Facility's Phone: 405-697-3500

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON-HAZARDOUS, WASTE, SOLID, CONTAMINATED SOIL AND SPECIAL WASTE R.Q.S.		001	CM	27.48 EST	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: CONFIRMATION # 55703 — STREAM # LM94-0539 — 11.7y — SW 27740

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: 24 Hr. PHONE # 505-748-3311

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR — Printed/Typed Name: STEVE H TERRY — Signature: Steve H Terry — Month Day Year: 10 8 22 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: LARRY ROBERTS — Signature: Larry Roberts — Month Day Year: 10 8 22 94

18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space: 94-8048

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. — Printed/Typed Name: DAWN HAYES — Signature: Dawn Hayes — Month Day Year: 10 8 23 94

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOYBEAN INK — PRINTED WITH SOY INK

ORIGINAL - RETURN TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month Day Year

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

GENERATOR COPY

Please ~~print or~~ type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (*Including Proper Shipping Name, Hazard Class and ID Number*)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

GENERATOR COPY

TELEPHONE
(505) 748-3311

EASYLINK
62905278
FAX
(505) 746-6410

REFINING COMPANY

501 EAST MAIN STREET • P. O. DRAWER 159

ARTESIA, NEW MEXICO 88210

FAX NUMBERS:

ACCOUNTING OFFICES:	505/746-6410	MARKETING OFFICES:	505/746-6155
REFINING/ENGINEERING:	505/748-9077	PIPELINE DIVISION:	505/746-4438

PLEASE DELIVER 11 PAGES, INCLUDING THIS COVER SHEET

TO: Jerry Sexton PHONE: _____

COMPANY/DEPARTMENT: OCD

MESSAGE: Here's the analysis with our logic

FROM: Darrell Moore DATE: 8/12/94

If you do not receive all pages, please call _____ at 505/748-3311, ext. _____.

August 12, 1994

Jerry,

Here are the analysis' that we have pertaining to our Lovington refinery. The analysis titled crude contaminated soil is a composite sample of several different spills from that refinery which would include components of Atmospheric Gas Oil (AGO). The second analysis titled 439 TK is from our crude tank here at Artesia that is fed directly from Lovington.

In the past, we have always been able to use process knowledge, in addition to some analysis, to show that these spills are non-hazardous. For instance, we know that AGO has a very high boiling point, between 650 and 850 degrees F, so that no benzene will be found. Also, this material has never been through the cracking process so no cresols could be formed. We also know that the metals will concentrate in the heavy cuts of which there are two heavier cuts than AGO, vacuum gas oil and vacuum recid (asphalt).

The analysis marked TK 439 is the bottoms from a crude tank fed from Lovington. Our position is that this is the nastiest hydrocarbon waste we have and it is non-hazardous as the analysis shows. This information, along with the analysis of contaminated soil from Lovington and our process knowledge have enabled us to get this material accepted at USPCI's landfill in Waynoka, Oklahoma as a non-hazardous waste.

After you have looked this over, give me a call and we can go over it. Our number is 748-3311.

Thanks,

Darrell Moore

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

June 20, 1994
Receiving Date: 06/10/94
Sample Type: Soil
Project No: NA
Project Location: Lovington, NM

Analysis Date: 06/16/94
Sampling Date: 06/07/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: NA

TA#	Field Code	REACTIVITY	SULFIDES (ppm)	CYANIDES (ppm)	CORROSIVITY	pH (s.u.)	IGNITABILITY
T22219	Crude Contaminated Soil	Non-reactive	<10.0	<2.5	Noncorrosive	7.73	Nonignitable
QC	Quality Control	---	---	---	---	7.00	---
% Precision		100	100	100	100	100	100
% Extraction Accuracy		---	---	---	---	---	---
% Instrument Accuracy		---	---	---	---	101	---

METHODS: EPA SW 846-2.1.3, 2.1.2, 2.1.1.

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

6-20-94
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

June 20, 1994
Receiving Date: 06/10/94
Sample Type: Soil
Project No: NA
Project Location: Lovington, NM

Analysis Date: 06/17/94
Sampling Date: 06/07/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: NA

TCLP METALS

TA#	Field Code	As (ppm)	Se (ppm)	Cr (ppm)	Cd (ppm)	Pb (ppm)	Ba (ppm)	Ag (ppm)	Hg (ppm)
	EPA LIMIT =	5.0	1.0	5.0	1.0	5.0	100	5.0	0.20
T22219	Crude Contaminated Soil	<0.1	<0.2	<0.1	<0.1	<0.1	1.2	<0.01	<0.001
QC	Quality Control	8.57	1.84	8.38	1.64	8.83	194.6	8.87	0.020
Detection Limit		0.1	0.2	0.1	0.1	0.1	1.0	0.01	0.001
% Precision		98	99	99	99	100	99	99	100
% Extraction Accuracy		103	127	86	82	93	100	93	100
% Instrument Accuracy		86	92	84	82	88	97	89	100

METHODS: EPA SW 846-1311, 6010, 7471.
TCLP METALS QC: Blank Spiked with 5.0 ppm As, Cr, Pb, Ag; 1.0 ppm Se, Cd; 100 ppm Ba; 0.020 ppm Hg.

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

6-20-94
Date

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

June 20, 1994
Receiving Date: 06/10/94
Sample Type: Soil
Project No: NA
Project Location: Lovington, NM

Analysis Date: 06/14/94
Sampling Date: 06/07/94
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: NA

TCLP VOLATILES (ppm)	EPA LIMIT	T22219 Crude Contaminated Soil	Detection Limit	QC	%P	%EA	%IA
Vinyl chloride	0.20	ND	0.002	0.067	115	166	134
1,1-Dichloroethene	0.70	ND	0.002	0.056	95	114	112
Methyl Ethyl Ketone	200.0	ND	0.020	0.059	108	166	118
Chloroform	6.00	ND	0.020	0.052	105	106	104
1,2-Dichloroethane	0.50	ND	0.002	0.042	110	94	84
Benzene	0.50	ND	0.002	0.058	98	118	116
Carbon Tetrachloride	0.50	ND	0.020	0.045	98	86	90
Trichloroethene	0.50	ND	0.002	0.041	96	82	82
Tetrachloroethene	0.70	ND	0.002	0.050	97	102	100
Chlorobenzene	100.00	ND	0.002	0.042	94	86	84
1,4-Dichlorobenzene	7.50	ND	0.002	0.043	94	86	86

	% Recovery
1,2-Dichloroethane	105
Toluene-d8	97
4-Bromofluorobenzene	93

ND = Not Detected

METHODS: EPA SW 846-1311, 8240.

6-20-94

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

DATE

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

June 20, 1994
Receiving Date: 06/10/94
Sample Type: Soil
Project No: NA
Project Location: Lovington, NM

Analysis Date: 06/13/94
Sampling Date: 06/07/94
Sample Condition: I & C
Sample Received by: MS
Project Name: NA

TCLP Semi-Volatiles (mg/L)	EPA Limit	Detection Limit	T22219 Crude Contaminated Soil	%P	%EA	QC	%IA
Pyridine	5.0	0.001	ND	101	104	0.577	115
1,4-Dichlorobenzene	7.5	0.001	ND	100	97	0.602	120
o-Cresol	200.0	0.001	ND	101	105	0.650	130
m,p-Cresol	200.0	0.001	ND	101	98	1.234	123
Total Cresol	200.0	0.001	ND	101	101	1.884	126
Hexachloroethane	3.0	0.001	ND	101	101	0.644	128
Nitrobenzene	2.0	0.001	ND	101	105	0.541	108
Hexachlorobutadiene	0.5	0.001	ND	101	102	0.599	119
2,4,6-Trichlorophenol	2.0	0.001	ND	105	97	0.610	122
2,4,5-Trichlorophenol	400.0	0.001	ND	104	107	0.557	111
2,4-Dinitrotoluene	0.13	0.001	ND	104	96	0.630	126
2,4-D	10.0	0.01	ND	95	104	0.553	110
Hexachlorobenzene	0.13	0.001	ND	102	90	0.566	113
2,4,5-TP	1.0	0.01	ND	103	103	0.473	94
Pentachlorophenol	100.0	0.001	ND	103	91	0.580	116
Lindane	0.4	0.001	ND	102	78	0.492	98
Total Heptachlor	0.008	0.001	ND	102	82	0.847	85
Endrin	0.02	0.001	ND	95	70	0.519	103
Methoxychlor	10.0	0.001	ND	99	82	0.457	91
Chlordane	0.03	0.0002	ND	102	120	0.0015	75
Toxaphene	0.5	0.005	ND	102	106	0.0152	76

	% RECOVERY
2-Fluorophenol SURR	113
Phenol-d5 SURR	104
Nitrobenzene-d5 SURR	105
2-Fluorobiphenyl SURR	109
2,4,6-Tribromophenol SURR	104
Terphenyl-d14 SURR	116

Methods: EPA SW 846-1311, 8270, 8080.
ND - Not Detected

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

6-20-94
DATE

2219

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Darrell Moore
Phone #: 505-748-3311
FAX #: 505-748-9017

Company Name & Address: Navajo Refining Co.

Project #:
Project Name :

Project Location: Lovington NM
Sampler Signature: Darrell Moore

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX MTBE	TPH	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
2219	Ci-1a Contaminated Soil	1			X							X		6/7/94	13:00			X		X	X		X

ANALYSIS REQUEST

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Report TWC direct; Hold

Relinquished by: Darrell Moore	Date: 6/9/94	Times: 16:30	Received by:
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date: 6-10-94	Times:	Received by Laboratory: MS CF

REMARKS

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

April 06, 1994
Receiving Date: 04/01/94
Sample Type: Solid
Project No: NA
Project Location: NA

Analysis Date: 04/02/94
Sampling Date: NA
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TCLP VOLATILES (ppm)	EPA LIMIT	T20016 FFE #21 439 TK	Detection Limit	QC	%P	%EA	%IA
Vinyl chloride	0.20	ND	0.002	0.052	100	128	104
1,1-Dichloroethene	0.70	ND	0.002	0.059	100	74	118
Methyl Ethyl Ketone	200.0	ND	0.020	0.052	100	110	104
Chloroform	6.00	ND	0.020	0.056	100	113	112
1,2-Dichloroethane	0.50	ND	0.002	0.054	100	109	108
Benzene	0.50	0.364	0.002	0.054	100	86	104
Carbon Tetrachloride	0.50	ND	0.020	0.051	100	93	102
Trichloroethene	0.50	ND	0.002	0.038	100	76	76
Tetrachloroethene	0.70	ND	0.002	0.051	100	99	102
Chlorobenzene	100.00	ND	0.002	0.049	100	97	98
1,4-Dichlorobenzene	7.50	ND	0.002	0.048	100	90	96

	% Recovery
1,2-Dichloroethane	95
Toluene-d8	109
4-Bromofluorobenzene	99

ND = Not Detected

METHODS: EPA SW 846-1311, 8240.

4-6-94

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

6701 Aberdeen Avenue
Lubbock, Texas 79424
806•794•1296
FAX 806•794•1298

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

April 06, 1994
Receiving Date: 04/01/94
Sample Type: Solid
Project No: NA
Project Location: NA

Analysis Date: 04/02/94
Sampling Date: NA
Sample Condition: I & C
Sample Received by: McD
Project Name: NA

TCLP Semi-Volatiles (ppm)	EPA Limit	Detection Limit	T20016 FFE #21	%P	%EA	QC	%IA
Pyridine	5.0	0.001	ND	100	109	0.561	112
1,4-Dichlorobenzene	7.5	0.001	ND	100	101	0.589	117
o-Cresol	200.0	0.001	ND	100	113	0.545	109
m,p-Cresol	200.0	0.001	ND	100	108	1.231	123
Total Cresol	200.0	0.001	ND	100	110	1.776	118
Hexachloroethane	3.0	0.001	ND	100	118	0.605	121
Nitrobenzene	2.0	0.001	ND	100	92	0.578	115
Hexachlorobutadiene	0.5	0.001	ND	100	94	0.565	113
2,4,6-Trichlorophenol	2.0	0.001	ND	100	92	0.608	121
2,4,5-Trichlorophenol	400.0	0.001	ND	100	96	0.482	96
2,4-Dinitrotoluene	0.13	0.001	ND	100	85	0.576	115
2,4-D	10.0	0.01	ND	100	85	0.430	86
Hexachlorobenzene	0.13	0.001	ND	100	97	0.599	119
2,4,5-TP	1.0	0.01	ND	100	94	0.490	98
Pentachlorophenol	100.0	0.001	ND	100	78	0.448	89
Lindane	0.4	0.001	ND	100	79	0.477	95
Total Heptachlor	0.008	0.001	ND	100	90	1.091	109
Endrin	0.02	0.001	ND	100	115	0.583	116
Methoxychlor	10.0	0.001	ND	100	88	0.436	87
Chlordane	0.03	0.0002	ND	100	95	0.0020	100
Toxaphene	0.5	0.005	ND	100	90	0.0209	104

	% RECOVERY
2-Fluorophenol SURR	89
Phenol-d5 SURR	93
Nitrobenzene-d5 SURR	104
2-Fluorobiphenyl SURR	98
2,4,6-Tribromophenol SURR	88
Terphenyl-d14 SURR	107

Methods: EPA SW 846-1311, 8270.
ND - Not Detected

4-6-94

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

DATE

TRACE ANALYSIS, INC.
A Laboratory for Advanced Environmental Research and Analysis

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

April 06, 1994
Receiving Date: 04/01/94
Sample Type: Solid
Project No: NA
Project Location: NA

Analysis Date: 04/03/94
Sampling Date: NA
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TCLP METALS

TA#	Field Code	As (ppm)	Se (ppm)	Cr (ppm)	Cd (ppm)	Pb (ppm)	Ba (ppm)	Ag (ppm)	Hg (ppm)
	EPA LIMIT =	5.0	1.0	5.0	1.0	5.0	100	5.0	0.20
T20016	FFE #21 7A-439	<0.1	<0.2	0.1	<0.1	<0.1	<1.0	0.05	<0.001
QC	Quality Control	5.1	1.0	5.1	1.0	5.1	100.1	5.2	0.020
	Detection Limit	0.1	0.2	0.1	0.1	0.1	1.0	0.01	0.001
	% Precision	100	100	100	100	100	100	100	100
	% Extraction Accuracy	104	100	102	106	100	101	100	100
	% Instrument Accuracy	102	103	102	99	101	100	104	100

METHODS: EPA SW 846-1311, 6010, 7471.
TCLP METALS QC: Blank Spiked with 5.0 ppm As, Cr, Pb, Ag; 1.0 ppm Se, Cd; 100 ppm Ba; 0.020 ppm Hg.

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

4-6-94
Date

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

April 06, 1994
Receiving Date: 04/01/94
Sample Type: Solid
Project No: NA
Project Location: NA

Analysis Date: 04/02/94
Sampling Date: NA
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	Field Code	REACTIVITY Sulfides (ppm)	REACTIVITY Cyanides (ppm)	CORROSIVITY pH (s.u.)	IGNITABILITY
T20016	FFE #21	<25.0	<2.5	7.23	Nonignitable
QC	Quality Control	---	---	7.0	---
	% Precision	100	---	100	100
	% Extraction Accuracy	---	---	---	---
	% Instrument Accuracy	100	---	100	---

METHODS: EPA SW 846-2.1.3, 2.1.2, 2.1.1

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

4-6-94
DATE

TOTAL P.0

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal | Time 1445 | Date 8/24/94

Originating Party	Other Parties
Darrell Moore - Navajo Refinery	Bill Olson - Envir. Bureau

Subject

Tank 835 Hydrotest Discharge

Discussion

Navajo requesting verbal approval of discharge of 56,000 bbls of hydrotest water from tank 835. Water used was fresh ground water. Analysis of hydrotest water was faxed to OCD on 8/22/94.

Conclusions or Agreements

I gave verbal approval with the following conditions
1.) water be applied such that ponding does not occur
2.) water be applied such that there is no runoff into a water way of U.S.

Distribution
Navajo file
Darrell Moore - Navajo Refinery (by fax)

Signed Bill Olson

Navajo REFINING COMPANY

501 EAST MAIN STREET ° P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE
(505) 748-3311

EASYLINK
62905278
FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

February 9, 1994

Mr. Bill Olsen
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87502

RE: UST Discovered on Property Acquired by Navajo

Dear Bill:

Navajo Refining acquired a piece of property located within the refining area from Mr. J. N. Hightower in 1988. This property had been a farm equipment maintenance facility, which Navajo converted into a welder-pipefitter shop. While excavating around the building on February 3, 1994, Navajo discovered a buried tank (UST). When contacted, Mr. Hightower informed us that he had forgotten about the UST, but that years ago the tank had been used to store gasoline. The tank is a small 500 gallon tank, which Navajo discovered had many holes in it.

Upon discovery of the tank, Navajo contacted the UST Bureau at NMED. NMED sent Ms. Teresa McMillan from Roswell to inspect the site and witness the removal of the tank. A copy of her inspection report is enclosed. Navajo's Safety Department inspected the tank prior to removal and determined it to be empty and vapor free. Following removal, Ms. McMillan documented the hoses in the tank and found indications of a prior release of product from the tank. Navajo collected a sample of soil from the 1 to 1.5 foot level, beneath the tank and in the area impacted by the release. A copy of the analyses is attached, indicating that there is BTEX and TPH present, but at very low concentrations perhaps indicative of the age and magnitude of the release.

Fortunately, this tank was located approximately 100 foot upgradient from one of Navajo's oil recovery wells, which has been in place for the last 10 years. It appears likely that product lost from this tank was recovered several years ago by Navajo, as part of a much greater effort to remediate product lost by the refinery. Once the tank was removed to Navajo's bone yard, the soil beneath the tank that showed signs of hydrocarbon release was removed to Navajo's truck bypass landfarm. Navajo believes that the actions taken to date have successfully resolved the discovery of this UST. The tank itself will remain in Navajo's bone yard until Navajo schedules its next sale of scrap metal for re-smelting. Upon completion of the original work that lead to the discovery of the tank, the hole will be back-filled with clean fill.

If you have any questions or need additional information please contact me at 748-3311.

Sincerely,

David G. Griffin
Supt. Environmental
Affairs & Quality Control

DGG/pb - enclosure

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

February 07, 1994
Receiving Date: 02/05/94
Sample Type: Soil
Project No: NA
Project Location: NA

Analysis Date: 02/06/94
Sampling Date: 02/04/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: NA

TA#	FIELD CODE	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)	TOTAL BTEX (ppb)
T18165	Welding Shop UST	7,849	<1	115	<1	29	30	
QC	Quality Control	164,457	208	204	203	201	601	
Detection Limit		5,000	1	1	1	1	1	
% Precision		91	100	93	99	109	112	
% Extraction Accuracy		102	104	98	99	93	90	
% Instrument Accuracy		100	104	102	101	100	100	

METHODS: EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample Spiked with 327,760 ppb TRPHC and Blank Spiked with 163,880 ppb TRPHC.

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

2/7/94
Date

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Darrell Moore
Phone #: 505 748 3311
FAX #: 505 748 9077

Company Name & Address: Navajo Refining

Project #:
Project Name :

Project Location:
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX, MTBE	TPH	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
	Welding Shop UST	1	1L		X							X		2/4/94	11:25	X	X						

Turn around # of days | **Fax ASAP** | **Report TWC direct** | **Hold**

SPECIAL HANDLING

Relinquished by:	Date:	Times:	Received by:
Darrell Moore	2/4/94	16 30	
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

REMARKS

INITIAL INCIDENT REPORT FORM

RECEIVED FEB 8 1994 ROSWELL

CONTACT INFORMATION District # 4 Field Office

Caller: McMullan Phone: 624-6123

Facility Name: Navajo Welder & Pipefitter shop County Eddy

Address East 5th Artesia NM 88210

(PUT CHECK MARK IN FRONT OF PRINCIPLE CONTACT IF ONE IS DESIGNATED)

X Facility Owner J N Hightower Phone

Address 908 South 5th Artesia NM 88210

Contact # 748-3311 David Griffin

X Facility Operator Navajo Refining Co Phone 748-3311

Address P.O. Box 159 Artesia NM 88210

They are handling site.

DISCHARGE INFORMATION

(check one) Suspected Release ____ Confirmed release X

Cause of Discharge holes in tank

Date/Time of discharge unk Duration unk Volume lost unk

Circle one: Unleaded gasoline Regular gasoline Diesel Waste Oil Other ____

Has further discharge been prevented? If so, describe yes Tank Removed

Have fire authorities been notified? If so, give name/phone NO

Has P/I inspector informed RP of immediate responsibilities? Yes

Are highly contaminated soils present? Describe Removal NO

HNu - 340 ppm at ~ 5-6 ft.

HYDROGEOLOGIC INFORMATION

Depth to water 18' Direction of GW flow

Surface water endangered NO Soil types clay

POSSIBLE IMPACTS FROM DISCHARGE

Well locations, depths, types

Utility Corridors

Vapors in Homes, buildings

Other

RECEIVED FEB 11 1994 OIL CONSERVATION DIV. SANTA FE

Call received by Date

****

Assignment OCD Referral Date

Phone #

Revised 1/9/92

TANK CLOSURE WORKSHEET

Tank Owner J. N Hightower Phone
Address 904 South 5th Artesia NM 88210

Contractor Name Navajo Refining Phone
Address PO Box 159 Artesia NM 88210
Contractor Name Phone
Address

Tank Closure Date 2-4-94

****

I. **Tank Closure Initial Procedures** (Check measures complied with):

- X Obtain recommended safety equipment for all personnel
- X Contact Fire Marshall or other fire officials
- X Bond or ground equipment
- None Drain product from piping and tank Tank was empty
- X Disconnect, then cap or remove piping
- None Remove all residual product from tank None
- X Excavate to tank top
- X Remove all tank fixtures
- None Properly purge or inert tank of all flammable vapors using approved methods.
- X Continually monitor for explosive vapors while tank is being removed.

II. **Tank Removal**

- N/A Create vent hole
- X Excavate tank using all safety precautions
- X Clean and inspect tank
- X Check excavation for evidence of leaks and notify NMED and other proper authorities if leak is found
- X Check vapor levels in tank before transporting
- X Dispose of tank in approved manner

Tank Disposal location Navajo storage yard temporarily until scrap metal salvage picks it up.
How did you assess site for leakage? Sampled Soil
Closure report kept at
NOTE: **Immediately** report any evidence of leakage to NMED at 827-0188.

I hereby state that the above information is correct

David L. Hoffman
Signature of owner or contractor performing work

****

FOR NMED USE ONLY
Notificaton Received Approved By
Inspection Date Inspector

State of New Mexico

ENVIRONMENT DEPARTMENT

JUDITH M. ESPINOSA
SECRETARY

RON CURRY
DEPUTY SECRETARY

BRUCE KING
GOVERNOR

Date: 2-4-94

Owner/Operator Name,Address: Navajo Refining
PO Box 159
Artesia NM 88210

Inspection by the undersigned has confirmed that a petroleum hydrocarbon release has occurred from the UST System. As owner or operator, you are responsible to take certain steps to investigate and correct this release as outlined in the UST Regulations, Parts XII and XIII.

First Step

Upon confirmation or identification of a release involving a petroleum UST system, the owner and operator of the UST system shall:

a. notify the UST Bureau within 24 hours by calling (505) 827-2629;

b. notify local fire authorities, when available, and;

c. immediately prevent any further release from the UST system by whatever means necessary, including removing product from the UST system, or any part of the UST system which is known to leak or is suspected of leaking. If necessary, the UST system should be removed from service.

Note: At this point it is advisable to seek the assistance of an environmental consultant that is familiar with the requirements of the UST Regulations. Environmental consulting firms are listed in the phone book under "Environmental Engineering",or "Geologists".

Second Step

Make a verbal report within 72 hours after discovery of the release by calling (505) 827-2629 with the following information:

a. list of any private water supplies within a 1000 foot radius of your facility, any public water supplies within a one mile radius, any surface water courses within 500 feet and whether these water sources have been impacted. If any are contaminated, you may be responsible for advising consumers and providing them with safe drinking water; **Note: Water supply information is available at the State Engineer's Office listed in the phone book or the local water utility authority.**

b. determination of any vapor hazards in buildings, utility corridors, or other surface or subsurface structures on or adjacent to the release site. If potentially harmful or explosive levels of vapors are discovered, you may have to provide a venting system or evacuation.

Third Step

Submit a written report within 7 days after discovery of the release to the address below with the following:

a. the information about private and public water supplies discovered in the first step above;

b. well logs, construction and location information for any on-site wells;

c. information about any known or suspected water supply impacts and any actions taken to abate such impacts;

d. information, including test results, about vapors detected in the vicinity of the site. If potentially explosive or harmful vapors were detected, information about actions taken to abate the vapors and any plans for further actions;

e. information about other fire and safety hazards and actions taken to abate such hazards, and;

f. information about current and past ownership of the UST system, substance(s) stored in the system, and the property on which the UST system is located.

By the time you have completed the above requirements you should have received a letter that will further instruct you as to specific requirements from the New Mexico Environment Department representative assigned to this case. Please note that it is in your best interest to initiate all required investigations and submit reports on these investigations in a timely manner pursuant to the UST Regulations. In so doing you will avoid the possibility of a cost recovery action by NMED against you if and when the Groundwater Protection Act (GWPA) Program allocates state funds for cleanup of your site. It should be further noted that you are designated to comply with the UST Regulations regardless of the receipt of correspondence from the Department.

If you have any questions about your responsibilities please contact the UST Bureau at (505) 827-2629.

Inspector, Prevention/Inspection Program: _____

Owner/Operator(circle one)signature: _____

Your signature is an acknowledgment that you received this letter, not an admission that a petroleum hydrocarbon release occurred.

Mail correspondence to: New Mexico Environment Department
Underground Storage Tank Bureau
Harold Runnels Building
1190 St. Francis Dr./P.O. Box 26110
Santa Fe, New Mexico 87502

NM Environment Department
Underground Storage Tank Bureau
Prevention/Inspection Section
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

(505) 827-0216

INSPECTION REPORT

DATE	CASE NUMBER	OPENING CONFERENCE TIME
2-4-94	205	10:35am

INSPECTION TYPE: ☐ COMPLIANCE ☐ REINSPECTION ☒ TANK CLOSURE ☐ INSTALLATION ☐ REPAIR ☐ COMPLAINT ☐ MODIFICATION

Facility Name: 1. Navajo Welder-Pipetter Shop	Facility No.	Phone No.
Address: East 5th Artesia NM		ZIP Code: 88210
Owner Name: 2. J ~~Go~~ N Hightower	Owner No.	Phone No.
Address: 908 S. 5th Artesia NM		ZIP Code: 88210
Facility Operator: 3. Navajo Refining Co.		Phone No.
Address: PO Box 159 Artesia NM		ZIP Code: 88210
Contractor Name: 4.	Installer No.	Phone No.
Address:		ZIP Code

TANK NO.	SIZE	CONTENTS	INSTALLATION DATE	TANK CONSTRUCTION	PIPING CONSTRUCTION	TANK RELEASE DETECTION	PIPING RELEASE DETECTION	TANK STATUS
A	500	NL?	unk	Steel	Steel	unk	Suction	NOT in use

SITE MAP

DISTRIBUTION: WHITE - Owner CANARY - Operator PINK - USTB GOLDENROD - Compliance Officer

		Yes	No	Unk.	N/A
1. All applicable tanks on site are registered.	1.		X		
2. Proper notification was made for the following:	2.				
a. Closure Waive 30 day notice	a.	X			~~X~~
b. Installation	b.				X
c. Modification	c.				X
d. Repair	d.				X
(3.) Tanks closed properly.	3.				
4. Tanks installed properly.	4.				X
5. Tanks repaired/modified properly.	5.				X
6. Release detection — tanks.	6.			X	
7. Release detection — piping. Suction	7.			X	
8. Record keeping:	8.				
a. Cathodic protection monitoring.	a.				X
b. Impressed current monitoring.	b.				X
c. Tank tightness test.	c.			X	
d. Line tightness test. Suction	d.			X	
e. Line leak detector test. Suction	e.			~~X~~	X
f. Release detection performance claims, tests.	f.			X	
g. Release detection sampling/testing results.	g.			X	
h. Inventory records.	h.			X	
i. Permanent closure records.	i.				X
j. Proof of financial responsibility.	j.			X	
9. Evidence of release/spill.	9.	X			

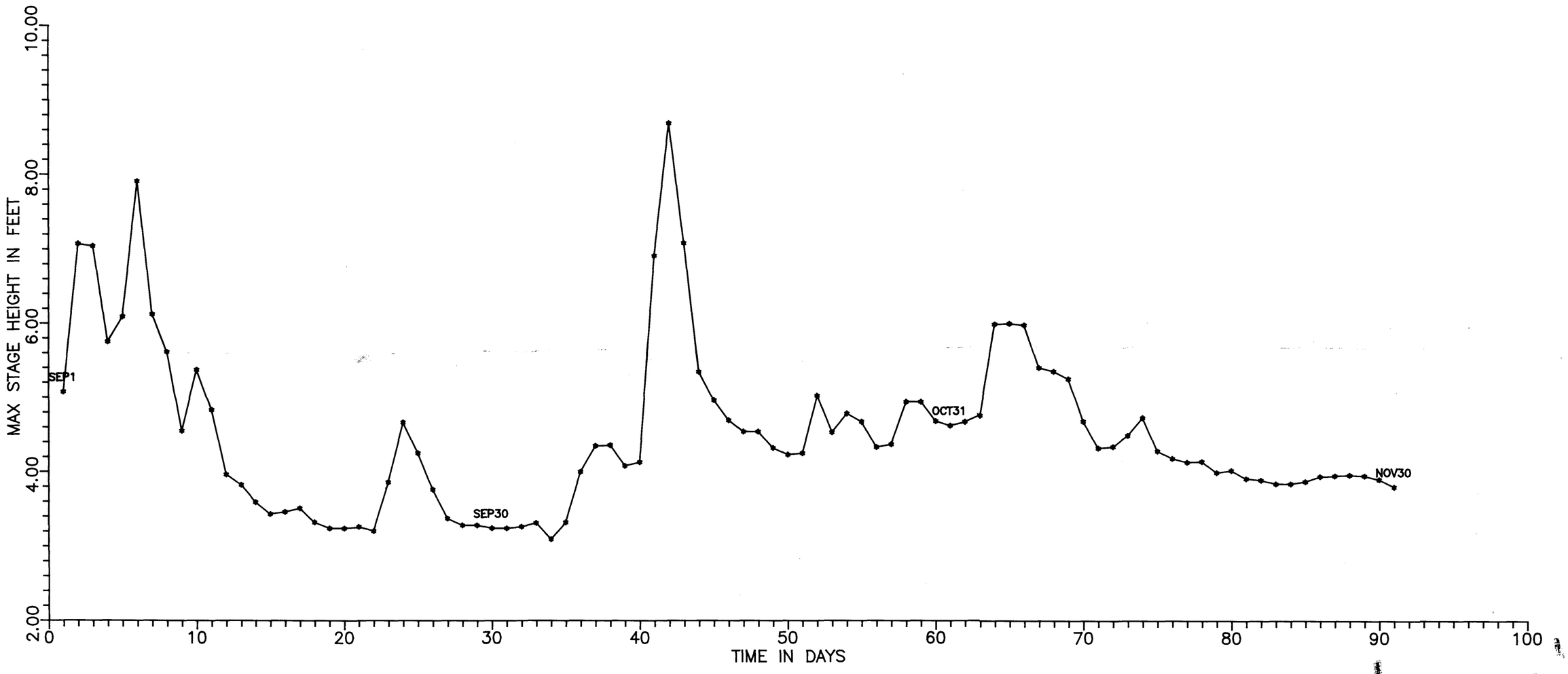
COMMENTS:
Tank has not been used for approx 8-10 yrs
Checked LEL 0% → Tank completely empty
Removed Tank
Soil around and below tank is stained.
I am requesting that they analyze for TPH in case
diesel was stored in the tank. Tank has numerous
corrosion holes on ends & sides.
Took one sample below the tank Analyzed w/
Calibrated HNU 340 ppm.
OCD - overseeing → wells.

CLOSING CONFERENCE:	DATE	TIME

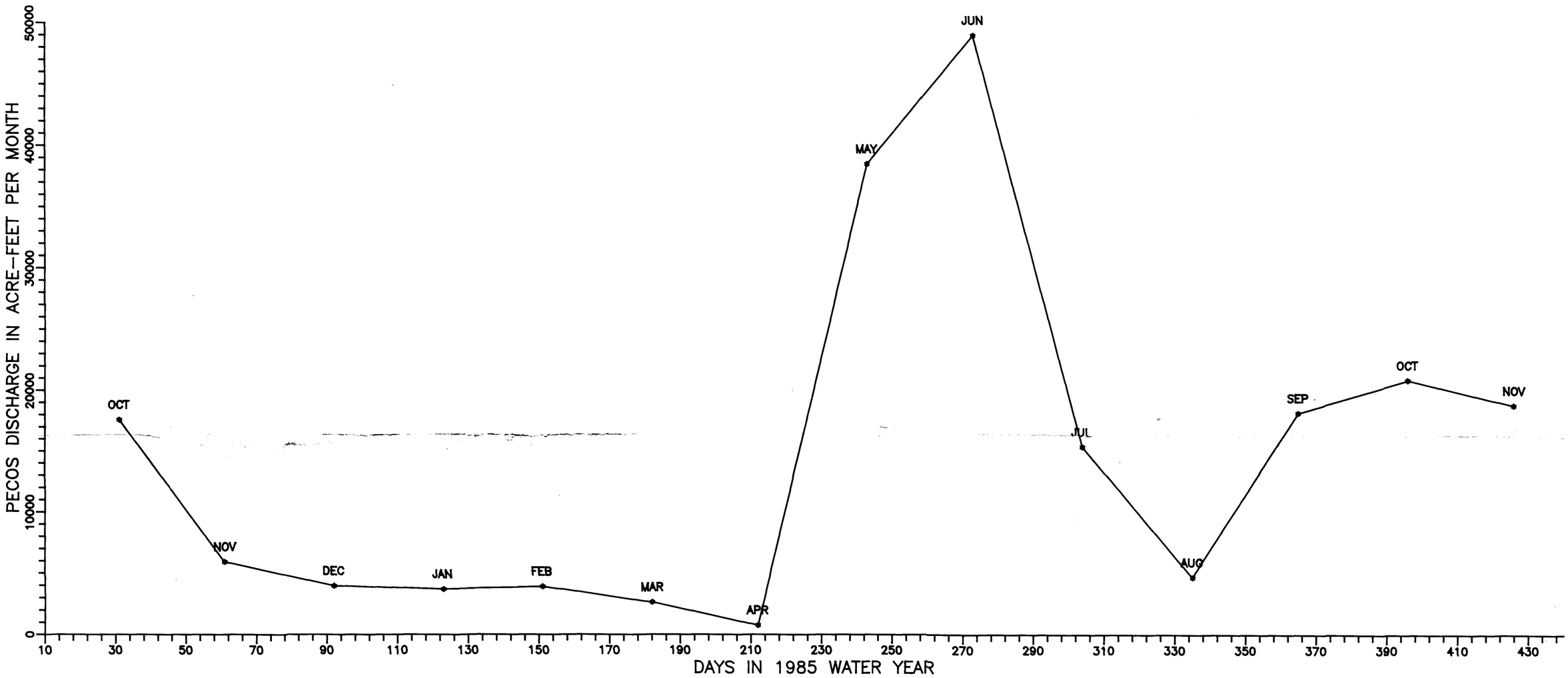
Compliance Officer's Signature [signature] Date 2-4-94

On-site Representative's Signature [signature] Date 2/4/94

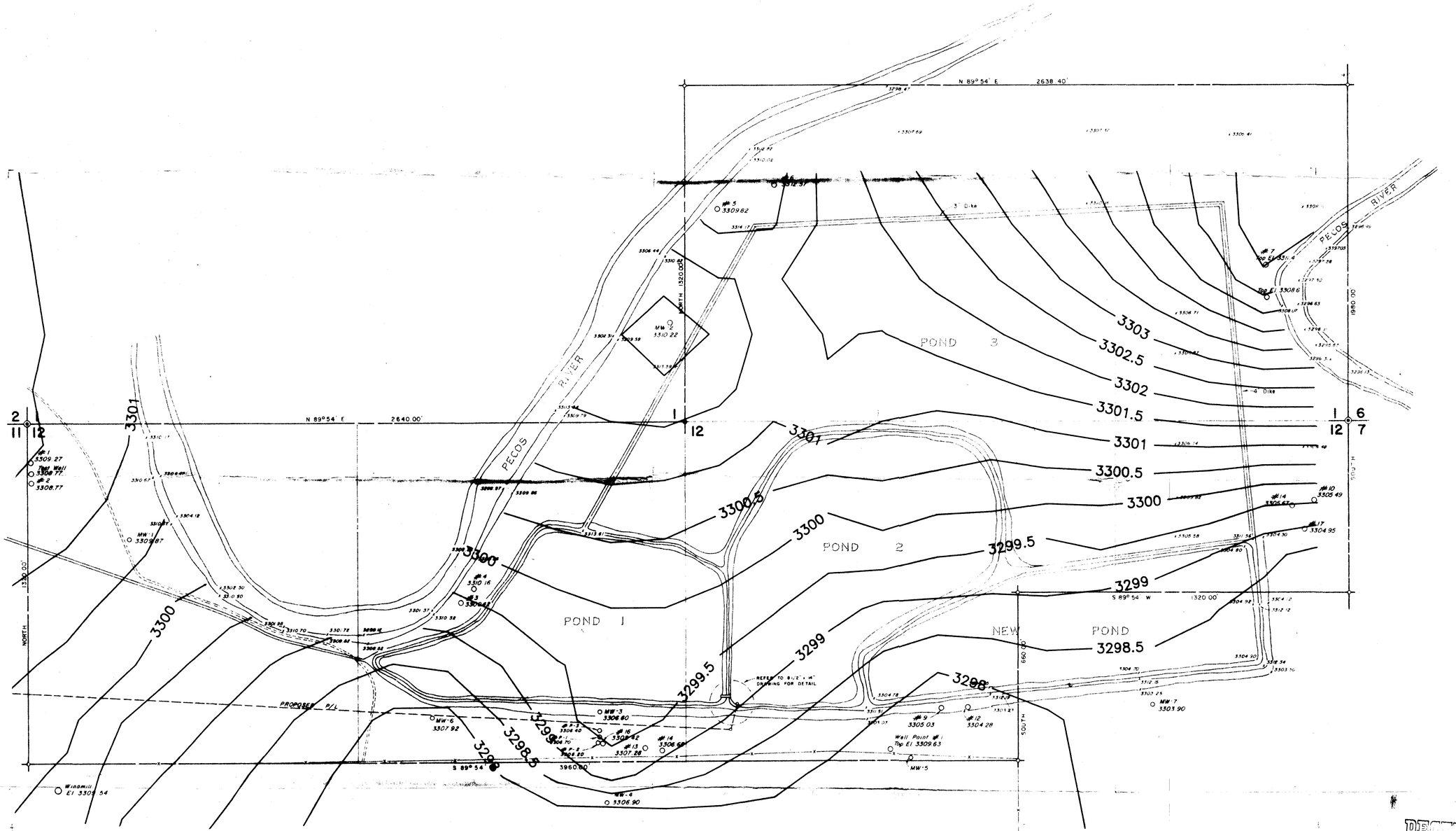
DISTRIBUTION: **WHITE** - Owner **CANARY** - Operator **PINK** - USTB **GOLDENROD** - Compliance Officer



PECOS RIVER HYDROGRAPH SHOWING DAILY MAXIMA FOR SEPTEMBER–NOVEMBER 1986



PECOS RIVER HYDROGRAPH SHOWING MONTHLY DISCHARGE IN ACRE-FEET
FOR 1985-1986 WATER YEAR



WATER LEVEL ELEVATIONS
NOVEMBER, 1986

RECEIVED
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SANTA FE

NAVAJO REFINING CO., INC.

PLATE 2
NAVAJO PONDS
SITUATE WITHIN
SECTIONS 1 & 12, T 17 S, R 26 E, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

JOHN WEST ENGINEERING CO.
CONSULTANTS
HOBBS NEW MEXICO

Surveyed By J Love	Drawn By M Mitchell	Last Rev. Date	Drawing Number
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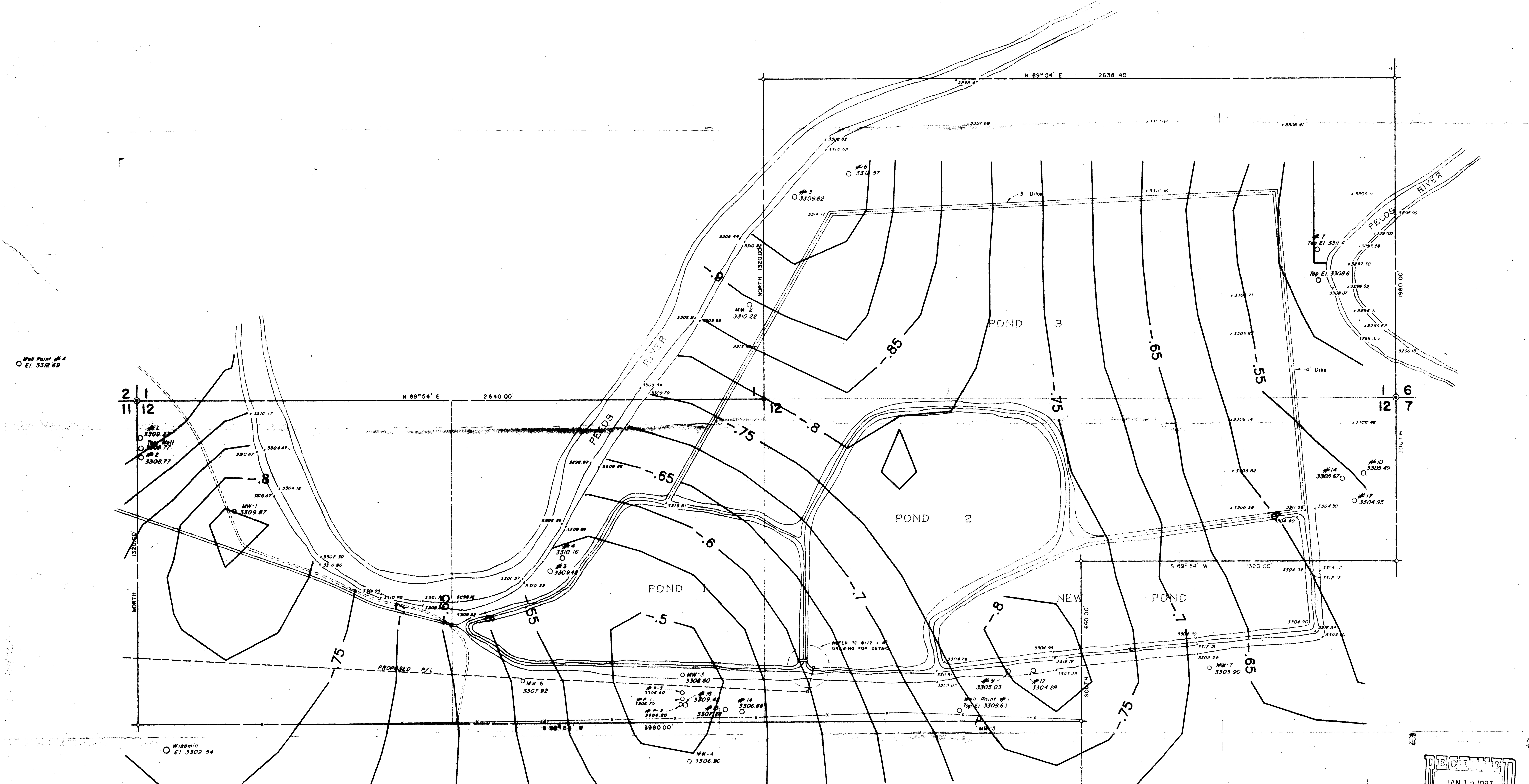
LF 6493



POND 1
POND 2
POND 3
NEW POND
PECOS RIVER
PECOS RIVER
N 89° 54' E 2638.40'
N 89° 54' E 2640.00'
S 89° 54' W 1320.00'
3980.00'
3' Dike
4' Dike
PROPOSED P/L
Well Point #4 El. 3312.69
Windmill El. 3309.54
Well Point #2 Top El. 3305.62
Well Point #1 Top El. 3309.63
MW-1 3309.87
MW-3 3306.60
MW-4 3306.90
MW-6 3307.92
MW-7 3303.90
MW-2 3310.22
#3 3309.42
#4 3310.16
#5 3309.82
#6 3312.57
#9 3305.03
#10 3305.49
#12 3304.28
#14 3305.67
#17 3304.95
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.75
.7
.65
.6
.55
.5

WATER LEVEL CHANGES

SEPTEMBER-OCTOBER 1986

NAVAJO REFINING CO., INC.

PLATE 2
NAVAJO PONDS
SITUATE WITHIN
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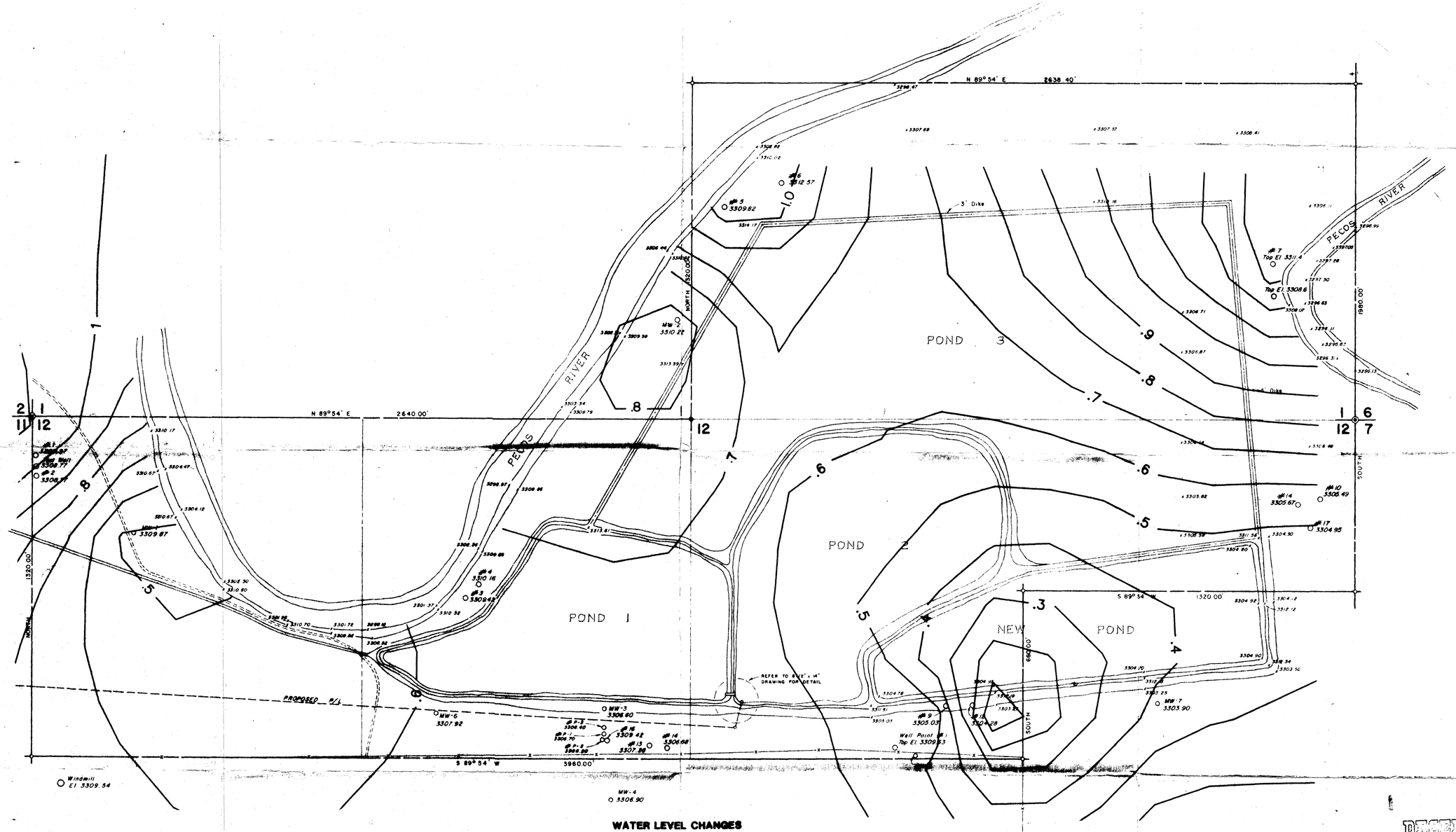

WATER LEVEL CHANGES

OCTOBER-NOVEMBER, 1986

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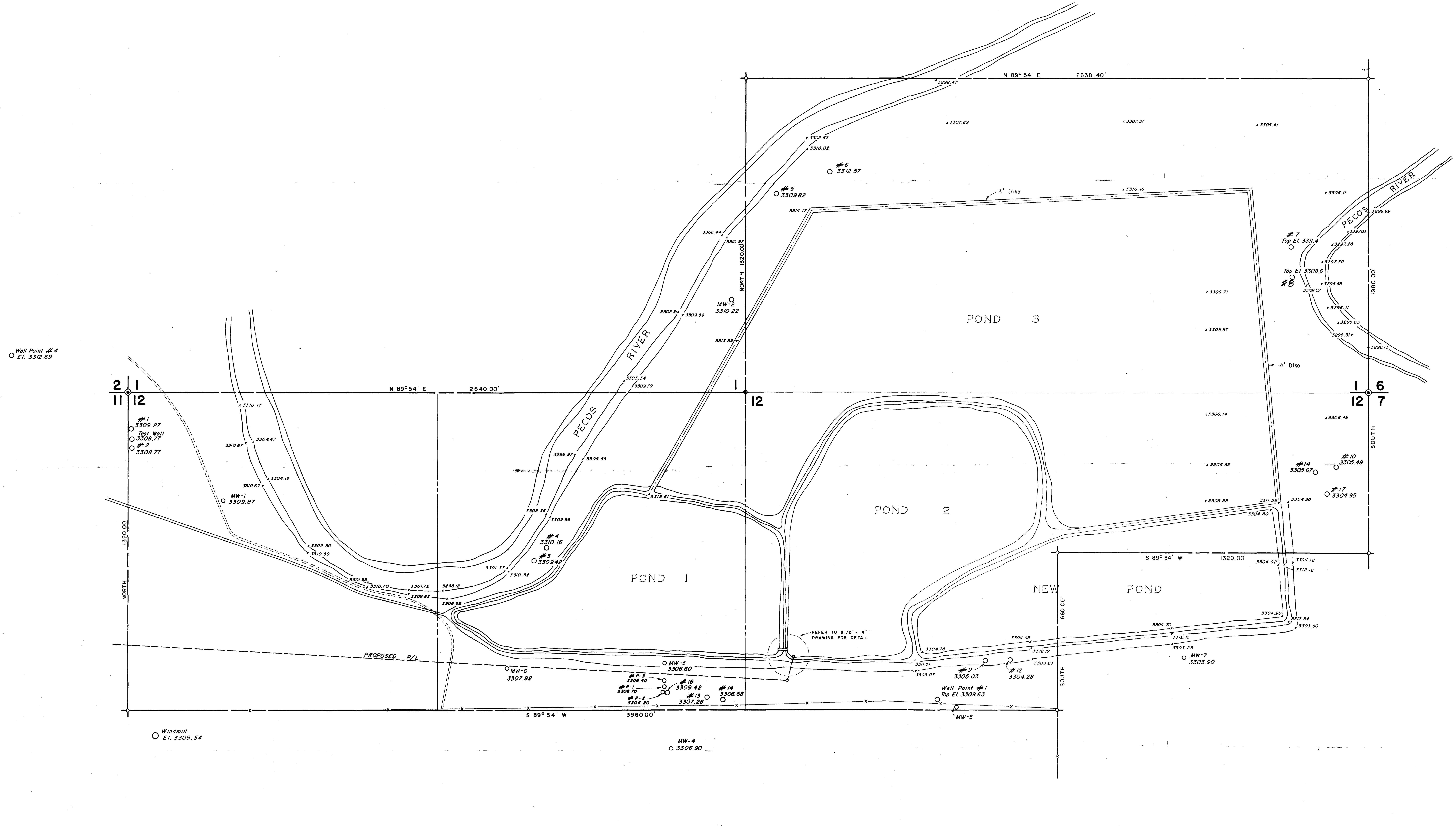

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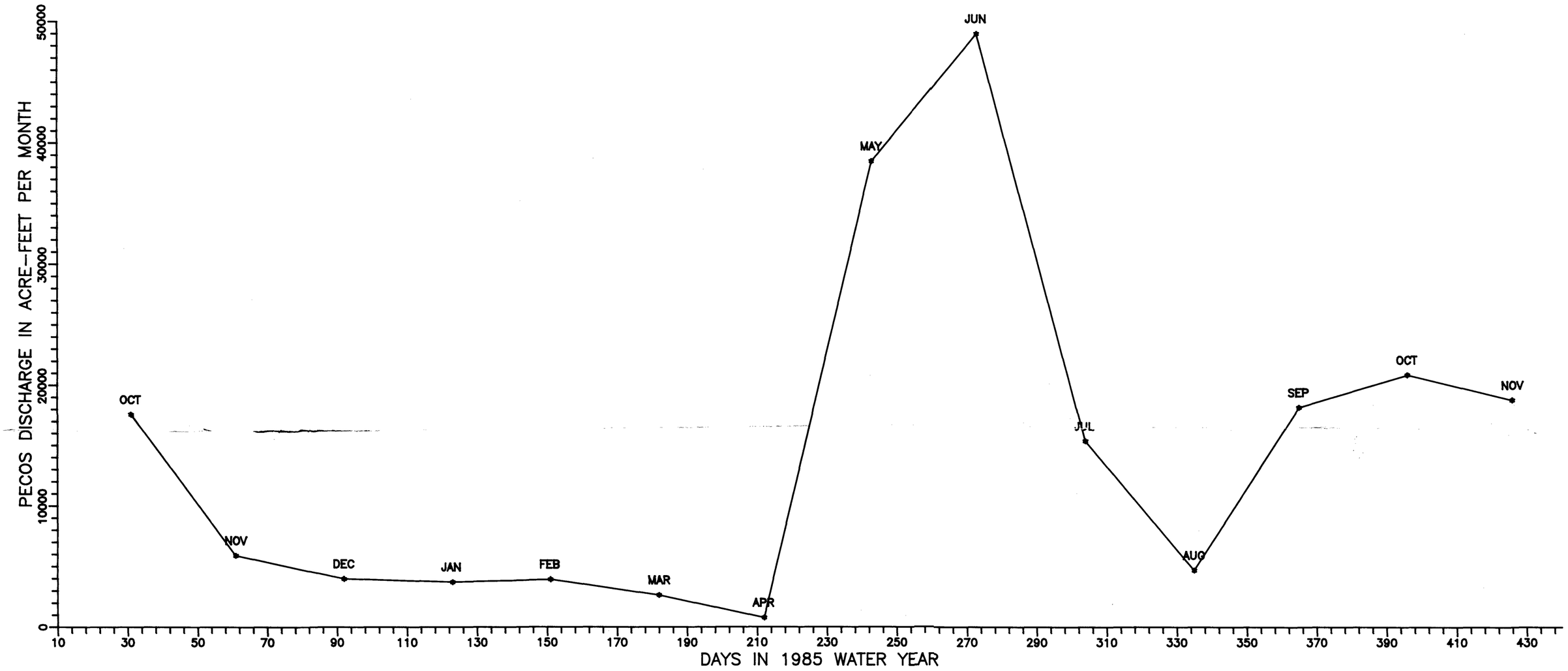
Date End 7/17/86	Checked By	Sheet 1 Of 1	

Scale: 1" = 220'

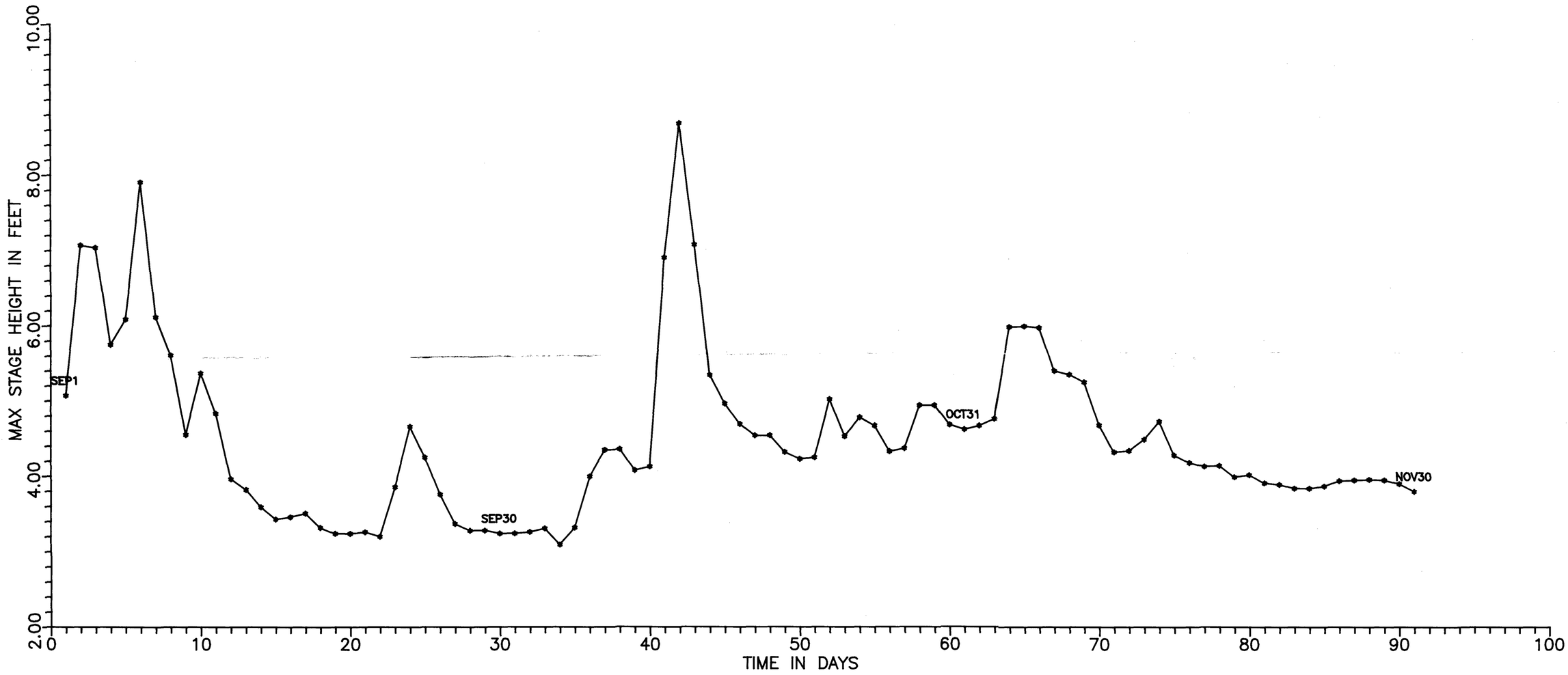
LA 8493

Rcvd 8/18/86 OCD/ [illegible]
(use this for tracing underlay)



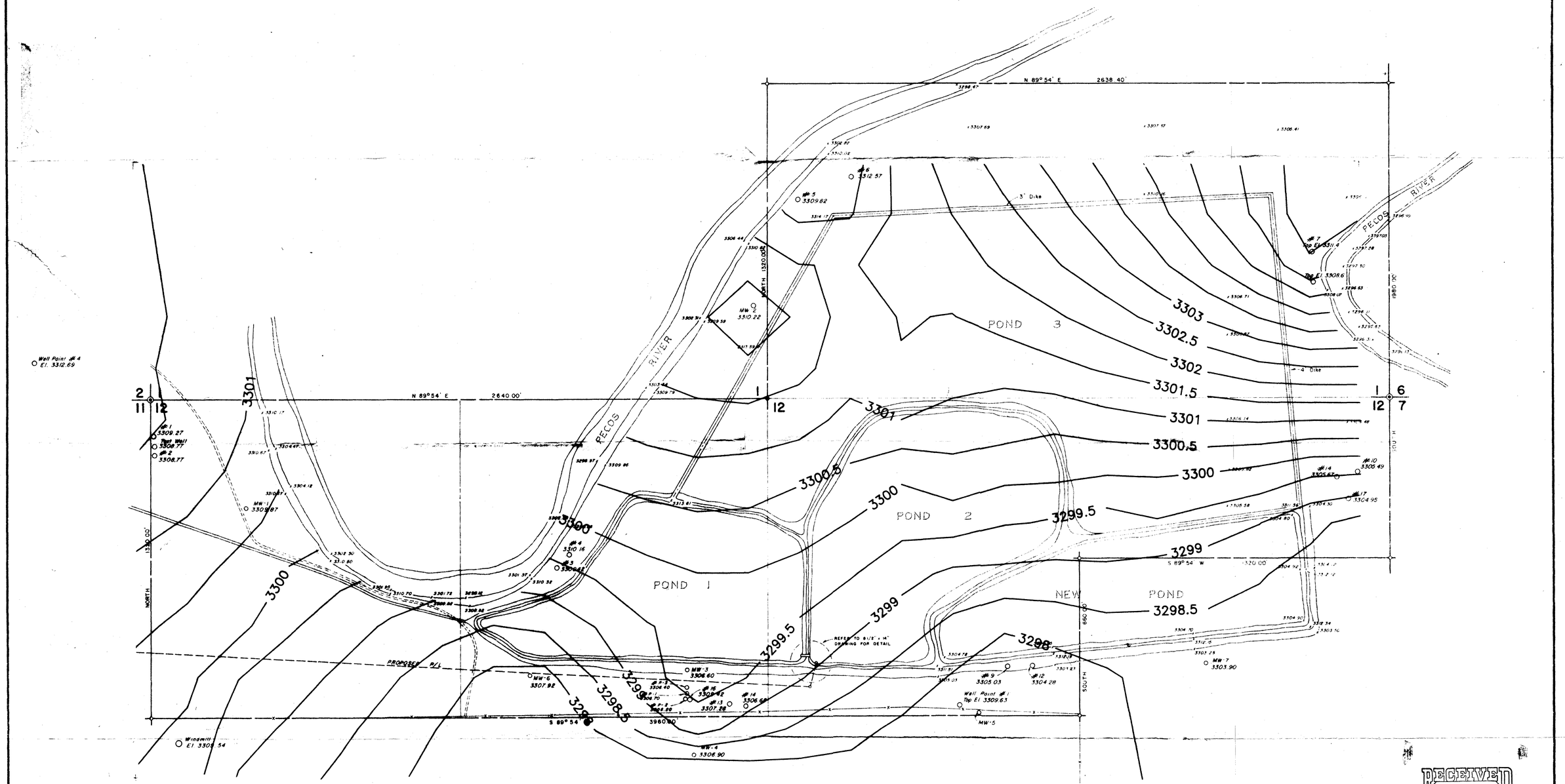
PECOS RIVER HYDROGRAPH SHOWING MONTHLY DISCHARGE IN ACRE-FEET
FOR 1985-1986 WATER YEAR

Pecos River
Discharge Hydrograph
Water year 85-86



PECOS RIVER HYDROGRAPH SHOWING DAILY MAXIMA FOR SEPTEMBER–NOVEMBER 1986

Pecos River
Stage Hydrograph Sept 1 - Nov 30, 1986



WATER LEVEL ELEVATIONS
NOVEMBER, 1986

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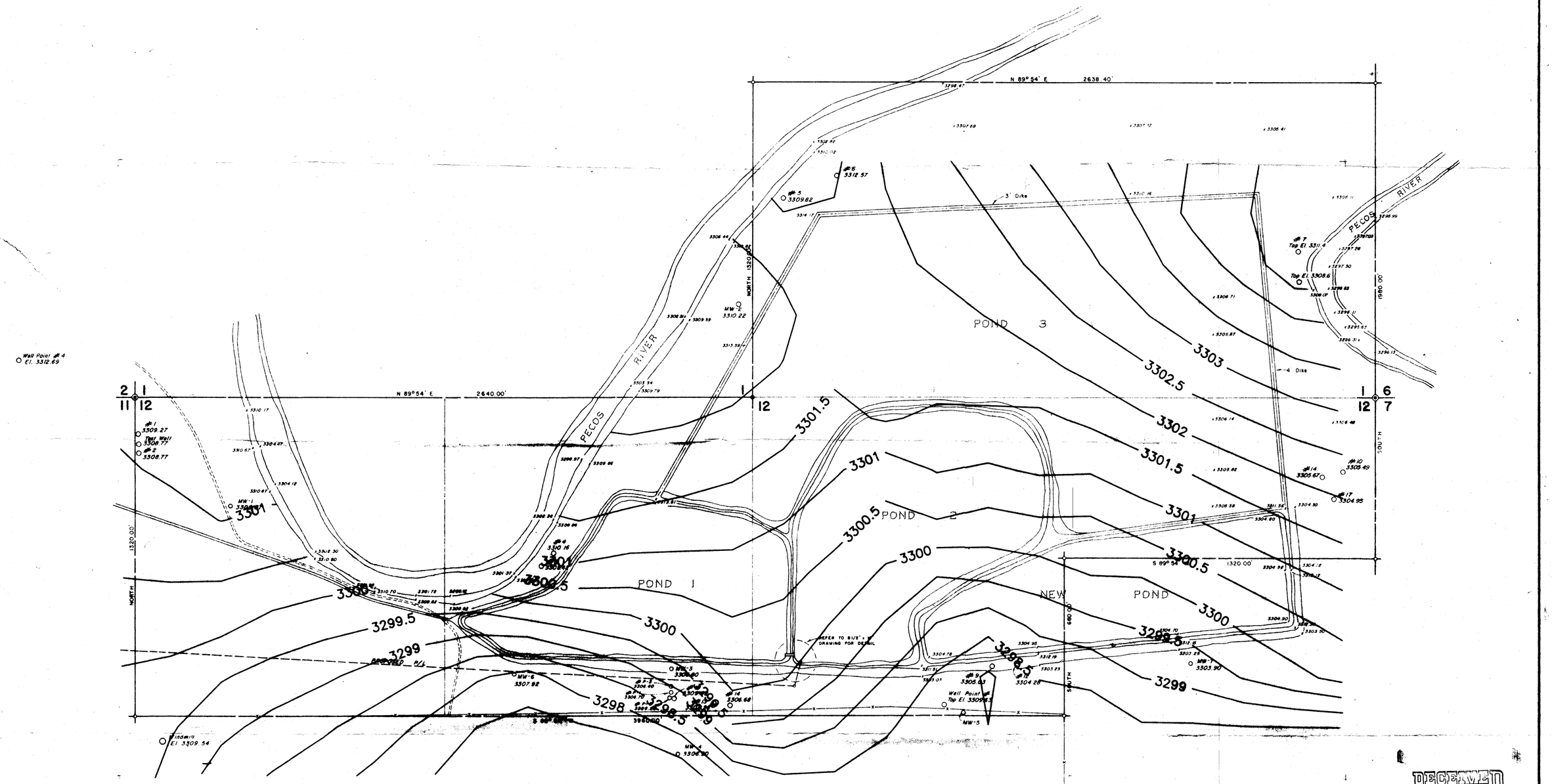
Date End 7/17/86	Checked By	Sheet 1 of 1	

LA-8693

Water Level Elevations Nov. '86



WATER LEVEL ELEVATIONS

SEPTEMBER, 1986

NAVAJO REFINING CO., INC.

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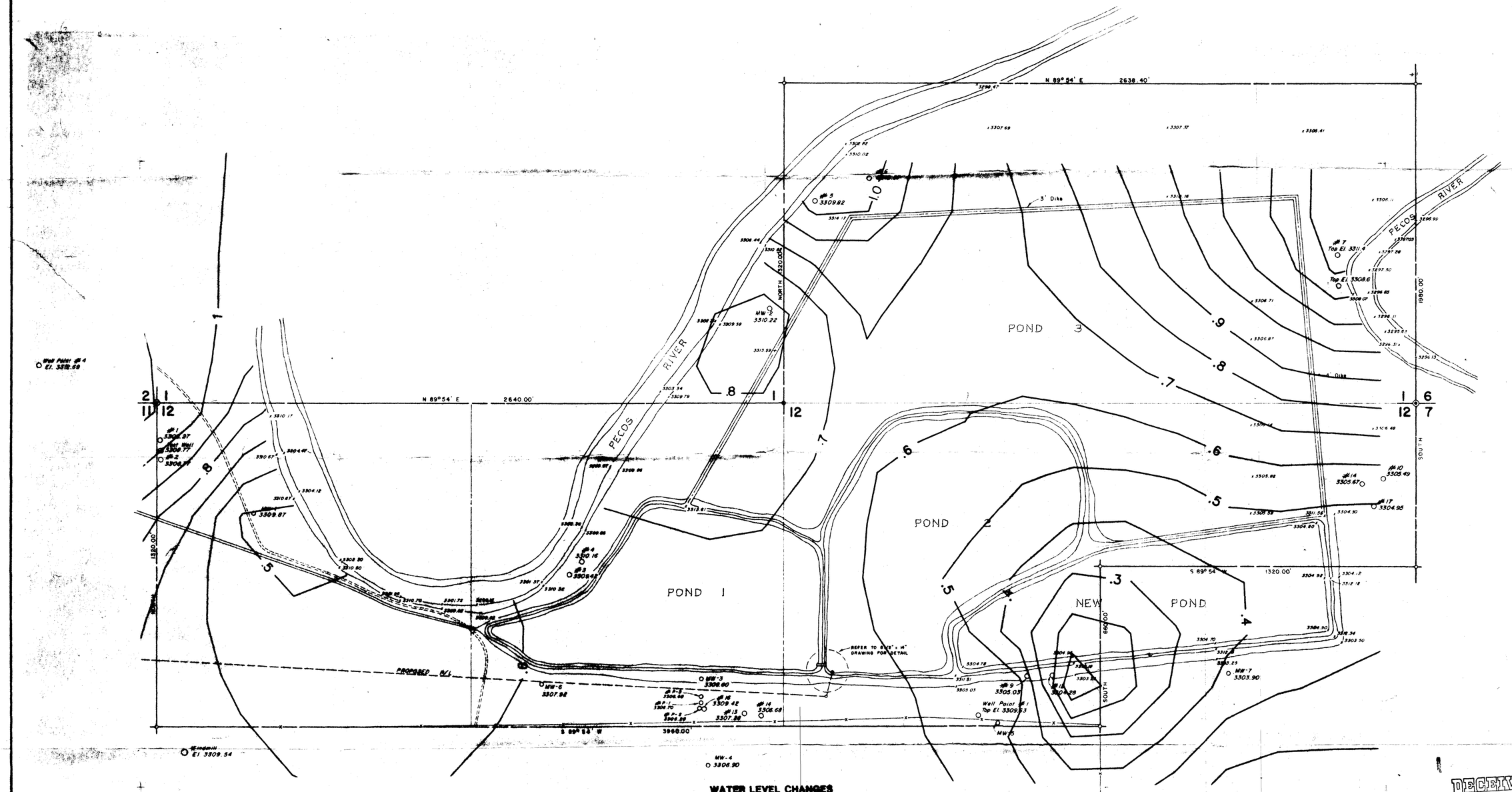
Date End 7/17/86	Checked By	Sheet 1 of 1	

LA 8493

Water Level Elevations Sept '86



WATER LEVEL CHANGES

OCTOBER-NOVEMBER, 1986

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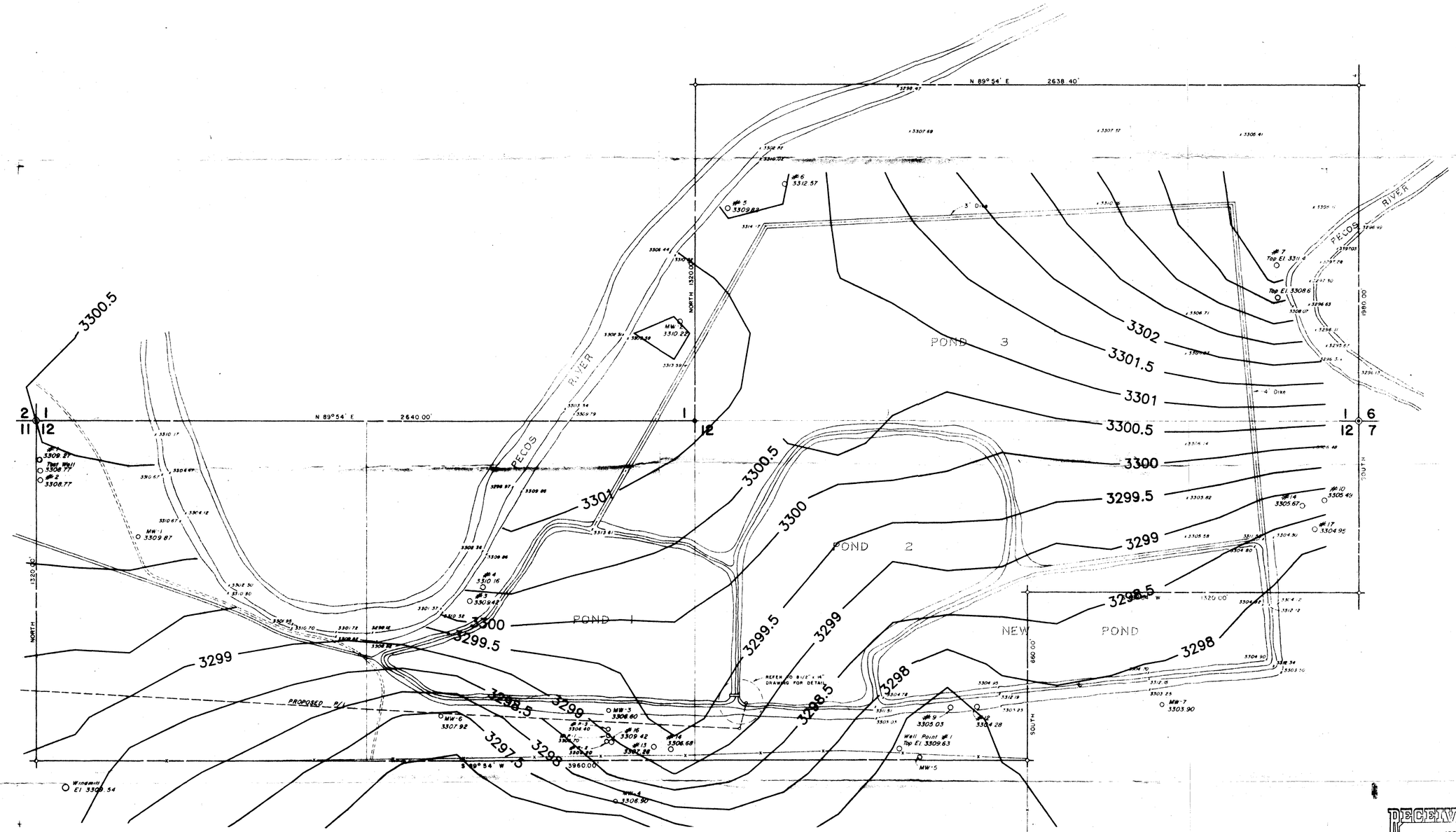
Surveyed By J. Lara	Drawn By M. Mitchell	Last Rev. Date	Drawing Number
Date Surv.	Date 7/18/86	File No.	
Date Rev. 7/17/86	Checked By	Sheet 1 of 1	

Water Level Changes Oct-Nov. '86



WATER LEVEL ELEVATIONS

OCTOBER, 1986

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Date End 7/17/86	Checked By	Sheet 1 of 1	

LA 6883

Water Level Elevations October 86

WATER LEVEL CHANGES
SEPTEMBER-OCTOBER 1986

NAVAJO REFINING CO., INC.

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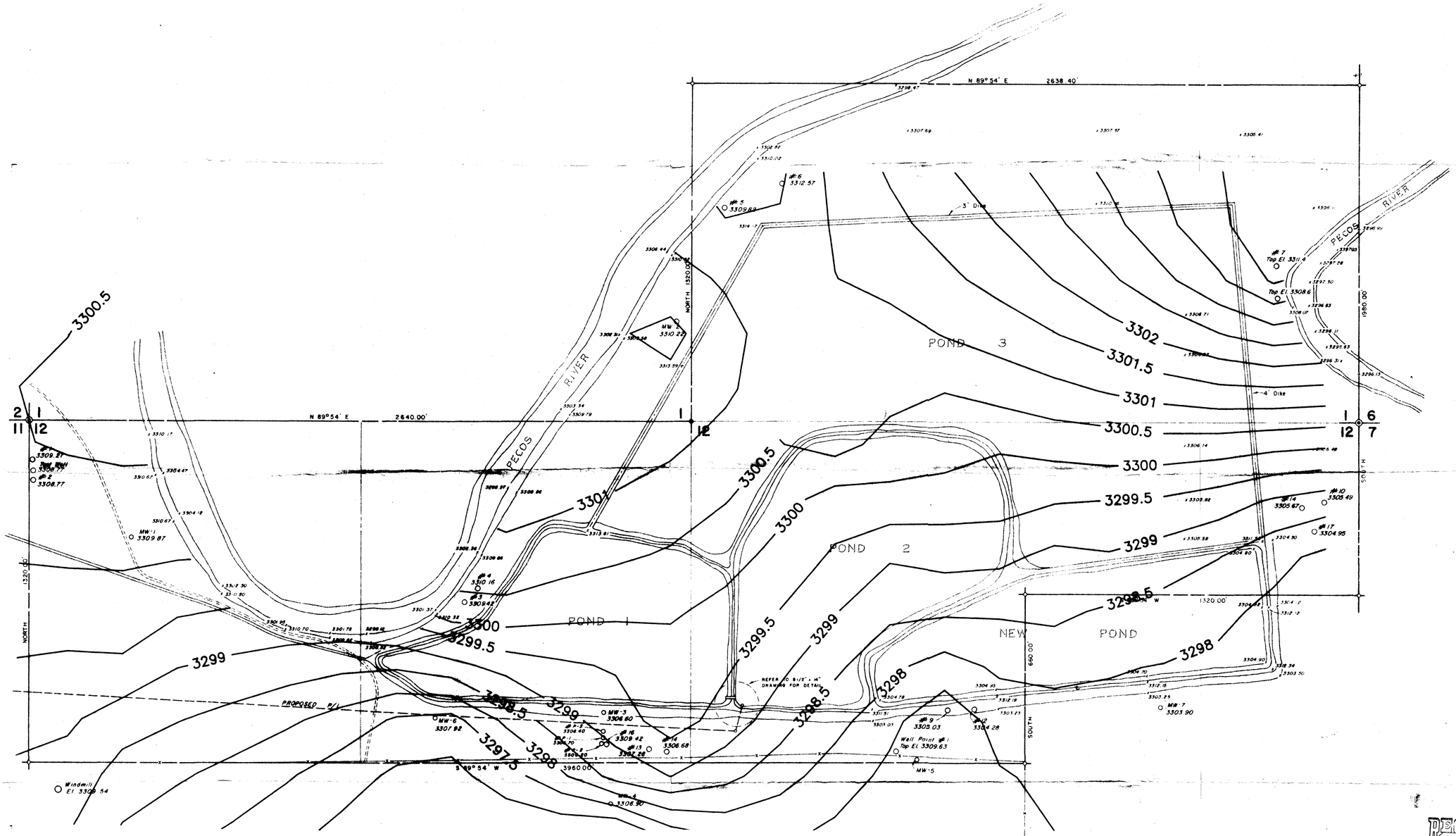

WATER LEVEL ELEVATIONS
OCTOBER, 1986

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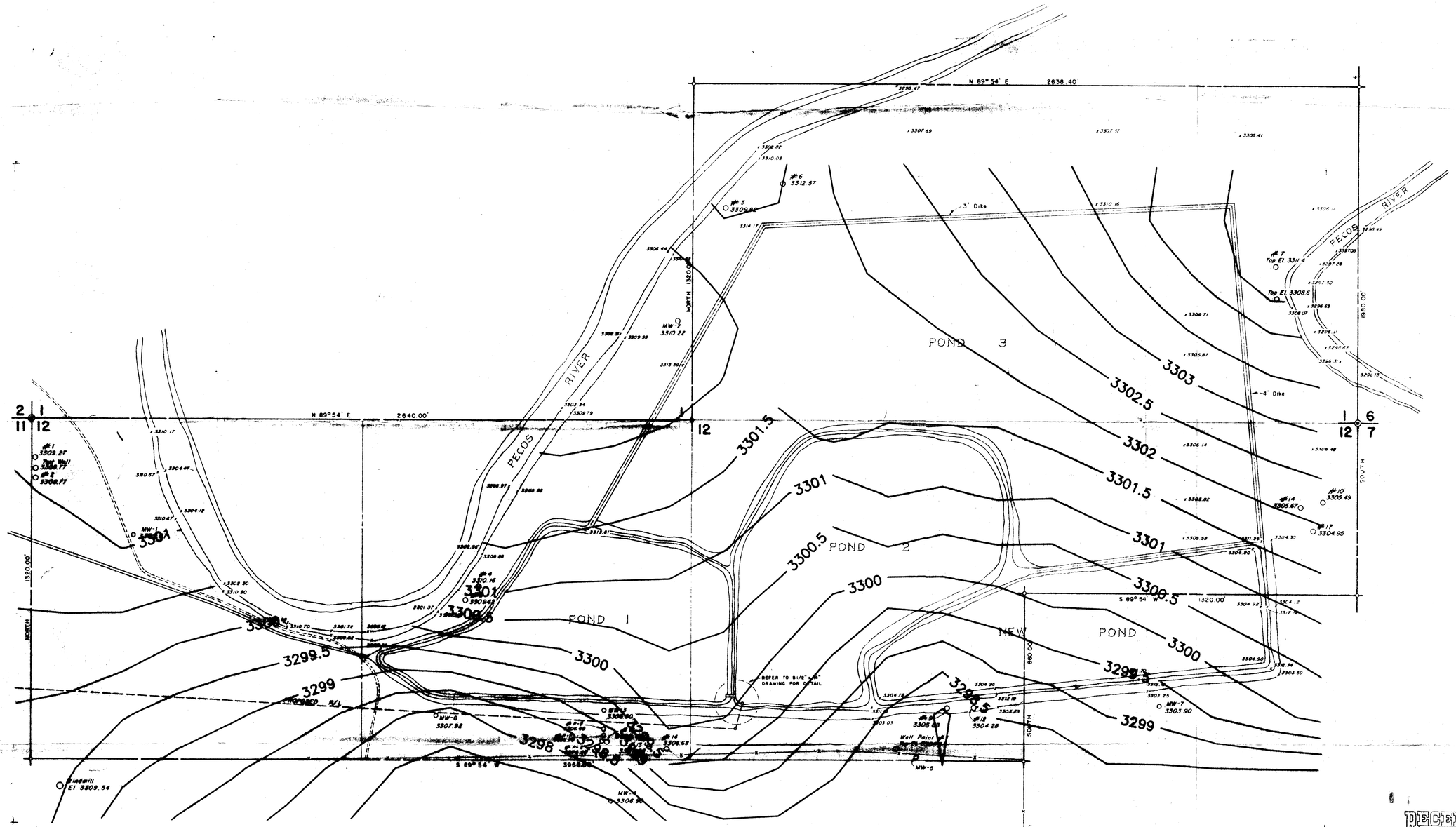

WATER LEVEL ELEVATIONS

SEPTEMBER, 1986

NAVAJO REFINING CO., INC.

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JOHN WEST ENGINEERING CO.
CONSULTANTS
HOBBS NEW MEXICO

Designed By J. Love	Drawn By M. Mitchell	Last Rev. Date	Drawing Number
Date Begun	Date 9/18/86	File No.	
Date Rev. 7/17/86	Checked By	Sheet 01	