3R - 53

GENERAL CORRESPONDENCE

YEAR(S): 1992-1987

Southern
Rockies
Business
Unit

San Juan Operations Center
September 21, 1992

NMOCD
P. O. Box 2088
Santa Fe, NM 87504

Attention: Bill Olson

File: BDS-25-986

Valdez "A" Monitor Wells

Amoco plans to abandon the four monitor wells on the Valdez "A" No. 1 location. This also will eliminate a $1000/year right-of-way payment to Mr. Tony Valdez. Sampling results on the four monitor wells are attached. Advise your approval should you concur.

B. D. Shaw
Environmental Coordinator

BDS:en

Attachment

cc: Denny Foust - NMOCD, Aztec, NM

Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

BTEX
Volatile Aromatic Hydrocarbons

Amoco

Project Name:	Valdez A	Report Date:	9/3/92
Sample ID:	#1	Date Sampled:	8/21/92
Sample Number:	9514	Date Received:	8/21/92
Sample Matrix:	water	Date Analyzed:	9/3/92
Preservative:	Cool, HCl		
Condition:	intact		

Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0

ND - Analyte not detected at stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Toluene-d8	101%	88-110%
4-Bromofluorobenzene	98%	86-115%

Reference: Method 5030, Purge and Trap
Method 8020, Aromatic Volatile Organics
SW-846, Test Methods for Evaluating Solid Wastes, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

Review

Inter·Mountain Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

BTEX
Volatile Aromatic Hydrocarbons

Amoco

Project Name:	Valdez A	Report Date:	9/3/92
Sample ID:	#2	Date Sampled:	8/21/92
Sample Number:	9515	Date Received:	8/21/92
Sample Matrix:	water	Date Analyzed:	9/3/92
Preservative:	Cool, HCl		
Condition:	intact		

Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0

ND - Analyte not detected at stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Toluene-d8	99%	88-110%
4-Bromofluorobenzene	96%	86-115%

Reference: Method 5030, Purge and Trap
Method 8020, Aromatic Volatile Organics
SW-846, Test Methods for Evaluating Solid Wastes, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

Review

Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

BTEX
Volatile Aromatic Hydrocarbons

Amoco

Project Name:	Valdez A	Report Date:	9/3/92
Sample ID:	#3	Date Sampled:	8/21/92
Sample Number:	9516	Date Received:	8/21/92
Sample Matrix:	water	Date Analyzed:	9/3/92
Preservative:	Cool, HCl		
Condition:	intact		

Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0

ND - Analyte not detected at stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Toluene-d8	96%	88-110%
4-Bromofluorobenzene	95%	86-115%

Reference: Method 5030, Purge and Trap
Method 8020, Aromatic Volatile Organics
SW-846, Test Methods for Evaluating Solid Wastes, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

Review

Inter-Mountain Laboratories, Inc.

2506 West Main Street
Farmington, New Mexico 87401
Tel. (505) 326-4737

BTEX
Volatile Aromatic Hydrocarbons

Amoco

Project Name:	Valdez A	Report Date:	9/3/92
Sample ID:	#4	Date Sampled:	8/21/92
Sample Number:	9517	Date Received:	8/21/92
Sample Matrix:	water	Date Analyzed:	9/3/92
Preservative:	Cool, HCl		
Condition:	intact		

Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0

ND - Analyte not detected at stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Toluene-d8	102%	88-110%
4-Bromofluorobenzene	99%	86-115%

Reference: Method 5030, Purge and Trap
Method 8020, Aromatic Volatile Organics
SW-846, Test Methods for Evaluating Solid Wastes, United States Environmental Protection Agency, September 1986.

Comments:

Analyst

Review

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 1530	Date 7/28/92

Originating Party	Other Parties
Buddy Shaw - Amoco	Bill Olson - OCD Aztec

Subject

Valdez "A" Monitor Wells

Discussion

Told him OCD need lab data on all monitor well, at Valdez A#1 before considering closure

He stated Valdez A#1E data is not being requested to be closed

Conclusions or Agreements

He will get lab data on all Valdez A#1 MW's

Amoco will submit seperate Ground Water plan for Valdez A#1E

Distribution

Signed

Southern
Rockies
Business
Unit

San Juan Operations Center

April 10, 1992

RECEIVED
APR 09 1992
OIL CONSERVATION DIV.
SANTA FE

NMOCD
P. O. Box 2088
Santa Fe, NM 87504

Attn: Bill Olson

File: BDS-7-986

Valdez "A" Monitor Wells

This is a status letter on the above subject old Tenneco well sites. Sampling of the monitor wells has been done over several months for BTEX. Results indicate that the monitor wells on the Valdez A #1 can be abandoned. However, results on the Valdez A #1E location indicate dissolved product exists in five of eight wells. Lab analyses are attached.

Amoco plans to abandon the four monitor wells on the Valdez A #1 location this summer. This also will eliminate a $1000/year right-of-way payment to Mr. Tony Valdez. We are also continuing to evaluate site conditions on the Valdez A #1E. Additional information will follow later. Please let me know if you have any questions.

B. D. Shaw
Environmental Coordinator

BDS/slb

Attachment

cc: Denny Foust - NMOCD Aztec, NM

DATE RECEIVED
JUN 28 1991

26 June, 1991

Amoco Production Company
Attn: Buddy Shaw

TECH, Inc.
333 East Main
Farmington
New Mexico
87401
505/327-3311

This was a lab mistake! → Valdez - BAS

VOLATILE AROMATIC HYDROCARBONS

Sample ID:	25-910528-4G	Report Date:	06-19-91
	~~Yazzie~~ A #1 + #2	Date Sampled:	05-28-91
Analysis Requested:	BTEX	Date Received:	05-30-91
Sample Matrix:	Water	Date Analyzed:	06-11-91
Condition:	Intact	Preservative:	Cool

Parameter	Concentration (ug/L) FP lab	Det. Limit (ug/L)
Benzene	ND	1.0
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.0
o-Xylene	ND	1.0

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Fluorobenzene	87.2 %

Method: Method 8020, Aromatic Volatile Organics, SW-846, USEPA, (Sept. 1986).

Comments:

Harlan P. Hamlow
Director of Laboratories

Ground Water Chemistry at Contaminated Sites
Identified in Open File Report H89-9

Well Name	Barrels/Day Water	Sample Number	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	Total Xylenes ug/l	TDS mg/l	Chloride mg/l	Sulfate mg/l	
Valdez A-1-E 1	0.45	9203051030	ND	ND	ND	0.5	3,530	176	2,150	(4)
Valdez A-1-E 2		9203051140	ND	ND	ND	ND	2,360	22.0	1,540	(4)
Valdez A-1-E 6		9203051250	65	44.1	20.3	82.7	1,750	82.7	889	(1)
Valdez A-1-E 3		9203051340	3.0	6.9	0.3	7.8	2,010	21.9	1,290	(1)
Valdez A-1-E 4		9203051445	0.4	5.3	0.6	3.1	2,260	233	835	(1)
Valdez A-1-E 5		9203051550	ND	0.5	ND	1.0	1,850	10.3	1,190	(1)
Valdez A-1-E 7		9203051620	1,160	1,110	302	1,972	1,370	66.8	584	(6)
Valdez A-1-E 8		9203051645	2,160	1,770	830	2,920	872	31.4	123	(6)

*Duplicate
ND = Not detected.
NA = Not analyzed.

Detection Limits:

(1) B = 0.2 ug/kg
T = 0.4 ug/kg
E = 0.2 ug/kg
PMX = 0.5 ug/kg
OX = 0.2 ug/kg

(2) B = 10.0 ug/kg
T = 20.0 ug/kg
E = 10.0 ug/kg
PMX = 30.0 ug/kg
OX = 15.0 ug/kg

(3) B = 0.2 ug/kg
T = 0.4 ug/kg
E = 0.2 ug/kg
PMX = 0.6 ug/kg
OX = 0.3 ug/kg

(4) B = 0.2 ug/kg
T = 0.3 ug/kg
E = 0.2 ug/kg
PMX = 0.5 ug/kg
OX = 0.2 ug/kg

(5) B = 20.0 ug/kg
T = 40.0 ug/kg
E = 20.0 ug/kg
PMX = 60.0 ug/kg
OX = 30.0 ug/kg

(6) B = 10.0 ug/kg
T = 15.0 ug/kg
E = 10.0 ug/kg
PMX = 25.0 ug/kg
OX = 10.0 ug/kg

54101/AMOCOSMP.WQ1

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

March 13, 1992

Eluid L. Martinez
State Engineer Office
P. O. Box 25102
Santa Fe, NM 87504-5102

Re: Bunce #1 well, located SW/4 NE/4 Section 24 T29N R11W, San Juan County, NM

Dear Mr. Martinez:

The referenced well was drilled in 1938 as a wildcat to the Farmington Sand by Noland and Bullock Company and subsequently plugged back to the Ojo Alamo and released to the land owner as a water well. The well is currently flowing high sulfate water at approximately five gallons per minute to the surface and down drainage into the San Juan River. Since the well was turned over to the landowner the NMOCD does not retain authority for this well, however, we do recommend that your office investigate this well as a possible contamination source to the river.

Your's truly,

Ernie Busch
District Geologist

cc: Tony E. Valdez
David Tomko-NMED Farmington
Denny Foust

NA
10/27/92

(Form C-102)
(Revised 7/1/52)

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL	✓	NOTICE OF INTENTION TO DRILL DEEPER	
NOTICE OF INTENTION TO PLUG WELL		NOTICE OF INTENTION TO PLUG BACK		NOTICE OF INTENTION TO SET LINER	
NOTICE OF INTENTION TO SQUEEZE		NOTICE OF INTENTION TO ACIDIZE		NOTICE OF INTENTION TO SHOOT (Nitro)	
NOTICE OF INTENTION TO GUN PERFORATE		NOTICE OF INTENTION (OTHER)		NOTICE OF INTENTION (OTHER)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

.... (Place) .... (Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the..

[illegible] (Company or Operator) ....Well No..........in.......... (Unit)

..........¼..........¼ of Sec.........., T.........., R..........,NMPM., ...Pool
(40-acre Subdivision)

..........County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

[illegible]

Approved.., 19..........
Except as follows:

[illegible]
Company or Operator

By [illegible]

Position..........

Send Communications regarding well to:

Approved
OIL CONSERVATION COMMISSION

By..

Title..

Name..

Address..

New Mexico
OIL CONSERVATION COMMISSION

AZTEC, NEW MEXICO

October6 , 1953

Mr. S. R. Bullock
Olathe, Colorado

Dear Mr. Bullock:

Since our correspondence regarding Noland & Bullock well in the NESE 24-29N-11W some 6 months ago, the oil commission has had more inquiries from the bonding company regarding the possibility of having this well released under the plugging bond. I just had a conversation with the Chief Engineer of the Commission, Mr. W. B. Macey and he requested that I write you a letter and see if something could be done to either plug this well or properly and legally release the well to the landowner so that he can convert it to a water well and assume plugging responsibility. I do not believe that it would be very difficult to set a mud plug in the Farmington sandstone and if this could be done and properly reported to the Commission I believe that we could get the bond released; however you or somebody representing you will have to take the initiative in making the proper arrangements with the landowner so that this can be done.

If I can take care of anything for you in the Aztec area which will help toward the desired end of having the bond released please let me know.

Would it be possible for me to contact the Noland of Noland & Bullock or is he in the Aztec area at this time to your knowledge?

I have visited the well personally and have talked to the landowner. He seems to consider that the well is his and as you are responsible under the plugging bond I do not believe that he could prevent you from plugging the well if you want to. If you do want to transfer the well to the landowner, then he will have to assume full plugging responsibility.

Yours very truly,

Emery C. Arnold
Oil & Gas Inspector, Dist. #3

ECA:ks

Aztec, New Mexico
February 15, 1954

TO WHOM IT MAY CONCERN:

This is to certify that I, AL GREER, was serving as duly appointed Oil & Gas Inspector, District 3, in July, 1944. This affidavit is to certify that the following work was performed at the S.R. Bullock and G.D. Noland #1 Bunce well in the SW¼NE¼ Section 24-29N-11W, San Juan County, New Mexico:

Six hundred forty-nine (649) feet of 6" casing was left in the well. The Farmington Sandstone was plugged back with heavy shale and mud into the casing and the well was released as a water well to the landowner who was Mr. Ralph Bunce, Bloomfield, New Mexico. The water sand was at approximately 200 feet.

Al Greer

New Mexico
Oil Conservation Commisison
AZTEC, NEW MEXICO

February 23, 1954

Mr. S. R. Bullock
Olathe, Colorado

Dear Mr. Bullock:

Since talking to you the other day we have prepared an affidavit and asked Mr. Al Greer, who was District Oil & Gas Inspector in July, 1944 to sign it. He has agreed and enclosed is a copy of the affidavit, one copy of which we are sending to Santa Fe, along with the Form C-102, Notice of Intention to Plug which was submitted by you in July, 1944. This C-102 shows that it was your intention to transfer the well to Mr. Bunce upon completion of plugging. Although the casing was never pulled as it was stated you intended to do, we believe that by filling the Farmington section with shale the State Regulations were complied with, sofar as the Farmington sandstone is concerned. At any rate we are sending the affidavit to Santa Fe and hope that they will approve cancellation of your bond. We should hear within the next 2 weeks.

Yours very truly,

Emery C. Arnold
Oil & Gas Inspector, District #3

ECA:ks
Encl.

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address:
6162 South Willow Drive
Englewood, Colorado 80111

December 7, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Attention: Ms. Bailey

Dear Ms. Bailey:

Attached is the analysis of the samples that were taken on November 10, 1987 at the Valdez A-1 well. The swamp water sample is the only one that shows any BTX. I had the lab check and they are confident that there is toluene in the swamp water sample.

Please call me at (303) 740-2579 if you require further information.

Very truly yours,

TENNECO OIL COMPANY

Martin W. Buys
Staff Environmental/Safety Coordinator

MWB/cmf:3094a

Attachments

Rocky Mountain
Analytical Laboratory

Enseco Incorporated

Enseco

ANALYTICAL RESULTS

FOR

TENNECO OIL COMPANY

NOVEMBER 25, 1987

Reviewed by:

Craig Huff

Maureen A. McDevitt

4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611

Facsimile: 303/431-7171

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #11

Laboratory ID: 64967-001 Enseco ID: 64967-001

Matrix: Water Sampled: 11/10/87 Received: 11/11/87

Authorized: 11/11/87 Analyzed: 11/12/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	N.D.	ug/L	0.50
m-Xylene	N.D.	ug/L	0.50
o & p-Xylene(s)	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Michael Hoffman Approved by: Robert Keck

Sample: 64967-001

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #12

Laboratory ID: 64967-002 Enseco ID: 64967-002

Matrix: Water Sampled: 11/10/87 Received: 11/11/87

Authorized: 11/11/87 Analyzed: 11/12/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	N.D.	ug/L	0.50
m-Xylene	N.D.	ug/L	0.50
o & p-Xylene(s)	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Michael Hoffman Approved by: Robert Keck

Sample: 64967-002

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #13

Laboratory ID: 64967-003 Enseco ID: 64967-003

Matrix: Water Sampled: 11/10/87 Received: 11/11/87

Authorized: 11/11/87 Analyzed: 11/12/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	N.D.	ug/L	0.50
m-Xylene	N.D.	ug/L	0.50
o & p-Xylene(s)	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Michael Hoffman Approved by: Robert Keck

Sample: 64967-003

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #14

Laboratory ID: 64967-004 Enseco ID: 64967-004

Matrix: Water Sampled: 11/10/87 Received: 11/11/87

Authorized: 11/11/87 Analyzed: 11/12/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	N.D.	ug/L	0.50
m-Xylene	N.D.	ug/L	0.50
o & p-Xylene(s)	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Michael Hoffman Approved by: Robert Keck

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 SW1

Laboratory ID: 64967-005 Enseco ID: 64967-005

Matrix: Water Sampled: 11/10/87 Received: 11/11/87

Authorized: 11/11/87 Analyzed: 11/12/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	3.9	ug/L	0.50
m-Xylene	N.D.	ug/L	0.50
o & p-Xylene(s)	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Michael Hoffman Approved by: Robert Keck

Ennecco Valdez - A1#

Hole 11

DTW = 15'(hold) - 14.495'(cut) pH = 7
sp cond = 470 @ 13°c

Hole 12

DTW = 17'(hold) - 14.27'(cut)
sp cond = 700 @ 13°c pH = 7

Hole 13

DTW = 18'(hold) - 14.445'(cut) pH = 7
sp cond - 9500 @ 12°c

Hole 14'

DTW = 19'(hold) - 14.75'(cut) pH = 7.5
sp cond = 1200 @ 13°c

Swamp 1

sp cond = 620 @ 9°c
pH = 7

753. A,B
1342
8-11-87

87-1342-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

87-1327-C

754 Wpl

REPORT TO: David Boyer
N.M. Oil Conservation Div.
P.O. Box 2088
Santa Fe 87504-2088

S.L.D. No. OR- 1327 A,B
DATE REC. 8-7-87
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Bloomfield ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 87|08|04|10|15

LOCATION CODE: (Township-Range-Section-Tracts) 29N+11W+14+ | | (10N06E2

USER CODE: 8212;35 SUBMITTER: Bill Olson CODE: | |

SAMPLE TYPE: WATER [X] SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ ____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ]
- [X] Head Space
- [ ]
- [ ]
- [ ]

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: ____

FIELD DATA:

pH=____; Conductivity=____umho/cm at ____°C; Chlorine Residual=____mg/l

Dissolved Oxygen=____mg/l; Alkalinity=____mg/l; Flow Rate____ ____/____

Depth to water ____ft.; Depth of well____ft.; Perforation Interval ____-____ft.; Casing: 2" PVC

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Tenneco - Valdez MW 11

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Willie Olson Method of Shipment to the Lab: hand

CHAIN OF CUSTODY

I certify that this sample was transferred from ____ to ____

at (location) ____ on ____/____/____ - ____:____ and t

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures ____ ____

ANALYSES PERFORMED

LAB. No.: OR- 1327 / 1342

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Headspace (1-5 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [redacted]	COMPOUND(S) DETECTED	CONC. [PPB]
Headspace		aromatic purgeables	N.D.
Methane MDL = 5ppm	9ppm	halogenated purgeables	N.D.
* DETECTION LIMIT *		÷ DETECTION LIMIT ÷	1-49/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed [x] Intact: Yes [ ] No [ ]. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 8/11/87 9/14/87 Analyst's signature: CS Burney ; Tony C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhein

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

754 WP

88-1062-C

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR- 1062 A, 45
DATE REC. 7-1-88
PRIORITY
PHONE(S): 827-5812

COLLECTION CITY: BLOOMFIELD ; COUNTY: SAN JUAN

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|2|8|0|8|3|0|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N+|1|1|W+|2|4+|4|2|3| (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER |X|, SOIL |_|, FOOD |_|, OTHER:

This form accompanies _____ Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: TENNECO VALDEZ A1 MW 11

FIELD DATA:

pH= 7 ; Conductivity= 460 umho/cm at 17 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

BAILED 5 V

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector):_____ Method of Shipment to the Lab:_____

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ OR Seals Intact: Yes ☐ No ☐

Signatures _____ _____

For OCD use: Date owner notified:_____ Phone or Letter? Initials_____

ANALYSES PERFORMED

LAB. No.: OR- 1326/1341

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Headspace (1-5 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [redacted]	COMPOUND(S) DETECTED	CONC. PPB'
Headspace		aromatic purgeables	N.D.
Methane MDC = 5ppm	24ppm	halogenated purgeables	N.D.
* DETECTION LIMIT *		÷ DETECTION LIMIT ÷	1/5/6

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed [x] Intact: Yes [ ] No [ ] Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 8/11/87 9/14/87 Analyst's signature: C S Brumley ; Mary C. Allen

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhein

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

754 WPK

88-1061-B

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR- 1061 H
DATE REC. 7-1-88
PRIORITY
PHONE(S): 827-5812

COLLECTION CITY: BLOOMFIELD ; COUNTY: SAN JUAN

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|2|8|0|8|4|5|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N+|1|1|W+|2|4+|4|2|3| (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies _____ Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [ ] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: TENNECO VALDEZ A 1 MW 12
(1 Vial Broken)

FIELD DATA:

pH= 7 ; Conductivity= 710 umho/cm at 19 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ _____/_____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____-_____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

BAILED 4 X

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): _____ Method of Shipment to the Lab: _____

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: _____ Phone or Letter? Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1061

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	N.D.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * ✱	.5-49/L	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ *Intact:* Yes ☐ No ☑ *Seal(s) broken by:* not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 7/4/88. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

87-1339-AB

87-1339-C

8-11-87

87-1324-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

REPORT TO: David Boyer
N.M. Oil Conservation Division --
P.O. Box 2088
Santa Fe 87504-2088

S.L.D. No. OR- 1324 AB
DATE REC. 8-7-87
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Bloomfield ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 8 7 0 8 0 4 0 9 3 5

LOCATION CODE: (Township-Range-Section-Tracts) 2 9 N + 1 1 W + 2 4 + (10N06E2

USER CODE: 8 2 2 3 5 SUBMITTER: Bill Olson CODE:

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (733) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [X] Head Space
- [ ]
- [ ]
- [ ]
- [ ]

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH=____; Conductivity=____umho/cm at ____°C; Chlorine Residual=____mg/l

Dissolved Oxygen=____mg/l; Alkalinity=____mg/l; Flow Rate____ ____/____

Depth to water ____ft.; Depth of well____ft.; Perforation Interval ____-____ft.; Casing: 2" PVC

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Tenneco - Valdez MW 13

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Willie Olson Method of Shipment to the Lab: hand

CHAIN OF CUSTODY

I certify that this sample was transferred from ____ to ____

at (location) ____ on ____/____/____ - ____:____ and t

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures ____ ____

ANALYSES PERFORMED

LAB. No.: OR- 1324/1339

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Headspace (1-5 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [redacted]	COMPOUND(S) DETECTED	CONC. [PPB]
Head space		aromatic purgeable	N.D.
Methane MDL = 5ppm	643 ppm	halogenated purgeable	N.D.
* DETECTION LIMIT *		+ DETECTION LIMIT +	1 PPB

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed [x] Intact: Yes [ ] No [ ]. Seal(s) broken by: no seals date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 8/11/87 9/14/87 Analyst's signature: A S Bowman ; Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K. Meyerhein

753:
1340,A,B
8-11-87
87-1340-C

SCIENTIFIC LABORATORY DIVISION 87-1325-C

HEALTH ENVIRONMENT

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570 754

REPORT TO: David Boyer
N.M. Oil Conservation Division
P.O Box 2088
Santa Fe 87504-2088

S.L.D. No. OR- 1325 A,B
DATE REC. 8-7-87
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Bloomfield ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 8 7 0 8 0 4 0 9 1 5

LOCATION CODE: (Township-Range-Section-Tracts) 2 9 N + 1 1 W + 2 4 + (10N06E2

USER CODE: 8 2 2 3 5 SUBMITTER: Bill Olson CODE:

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [X] Head Space
- [ ]
- [ ]
- [ ]
- [ ]

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks:

FIELD DATA:

pH=____; Conductivity=____ umho/cm at ____ °C; Chlorine Residual=____ mg/l

Dissolved Oxygen=____ mg/l; Alkalinity=____ mg/l; Flow Rate ____ ____/____

Depth to water ____ ft.; Depth of well ____ ft.; Perforation Interval ____-____ ft.; Casing:

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Tenneco - Valdez MW-14

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): William Olson Method of Shipment to the Lab: hand

CHAIN OF CUSTODY

I certify that this sample was transferred from ____ to ____

at (location) ____ on ___/___/___ - ___:___ and t

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures ____ ____

ANALYSES PERFORMED LAB. No.: OR- 1325/1346

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Headspace (1-5 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
Head Space		halogenated purgeables	N.D.
Methane MDL = 5ppm	437 ppm	aromatic purgeables	N.D.
* DETECTION LIMIT *		÷ DETECTION LIMIT ÷	1-49/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed [x] Intact: Yes [ ] No [ ] Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 9/11/87 9/14/87 Analyst's signature: AS Burney; Gary C. Edes

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhein

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

754 WPU

88-1060-C

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR- 1066 #+B
DATE REC. 7-1-88
PRIORITY
PHONE(S): 827-5812

COLLECTION CITY: BLOOMFIELD ; COUNTY: SAN JUAN

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|6|2|8|0|9|0|0|

LOCATION CODE: (Township-Range-Section-Tracts) |29N|10+|1/|W+|24+4|23| (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER |X|, SOIL |_|, FOOD |_|, OTHER:

This form accompanies _____ Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: TENNECO VALDEZ A1 MW14

FIELD DATA:

pH= 7 ; Conductivity= 1150 umho/cm at 18.5 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ _____/_____

Depth to water _____ ft.; Depth of well _____ ft.; Perforation Interval _____-_____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): _____ Method of Shipment to the Lab: _____

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ OR Seals Intact: Yes ☐ No ☐

Signatures _____ _____

For OCD use: Date owner notified: _____ Phone or Letter? Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1060

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables			
benzene	T.R.		
toluene	T.R.		
ethylbenzene	T.R.		
p + m - xylene	3.6		
o-xylene	T.R.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * ✱	.5 ug/L	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: p-xylene confirmed by mass spectrometry

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 7/4/88. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhen

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address:
6162 South Willow Drive
Englewood, Colorado 80111

SEP 14 1987

September 10, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Attention: Ms. Bailey

Dear Ms. Bailey:

Attached is the analysis of the samples that were taken on August 5, 1987 at the Valdez A1 well. Also attached is the drafted site diagram.

Please call me after you have reviewed the diagram and the analytical results.

Very truly yours,

TENNECO OIL COMPANY

Martin W. Buys

Martin W. Buys
Staff Environmental/Safety Coordinator

MWB/cmf:2985a

Attachment

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #11

Laboratory ID: 64218-001 Enseco ID: 64218-001

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87 Analyzed: 08/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	N.D.	ug/L	0.50
Xylene,m	N.D.	ug/L	0.50
Xylenes,o & p	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Sample: 64218-001

Enseco

METALS PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #11

Laboratory ID: 64218-001 Enseco ID: 64218-001

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	142	mg/L	0.1	200.7	08/20/87
Iron	3.0	mg/L	0.05	200.7	08/20/87
Magnesium	8.8	mg/L	0.1	200.7	08/20/87
Potassium	N.D.	mg/L	5	200.7	08/20/87
Sodium	28	mg/L	0.05	200.7	08/20/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64218-001

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #11

Laboratory ID: 64218-001 Enseco ID: 64218-001

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.47	units	0.01	150.1	08/05/87
Specific Conductance @ 25C	727	umhos/cm	1	120.1/9050	08/05/87
Total Dissolved Solids	540	mg/L	10	160.1	08/12/87
Fluoride	0.7	mg/L	0.1	340.2	08/18/87
Chloride	4	mg/L	3	300.0	08/09/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	08/11/87
Sulfate	115	mg/L	5	300.0	08/09/87
Total Alkalinity as CaCO3	287	mg/L	5	310.1/403	08/05/87
Bicarb. Alkalinity as CaCO3	287	mg/L	5	310.1/403	08/05/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Ammonia as N	N.D.	mg/L	0.1	350.1	08/11/87
Total Cations	9.2	meq/L	0.1	104C	08/24/87
Total Anions	8.3	meq/L	0.3	104C	08/24/87
% Difference	5.2	%	0.1	104C	08/24/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 64218-001

ION BALANCE RESULTS
for sample #64218001

CATION ANALYSIS

ELEMENT	mg/L	meq/L
Ca	142.000	7.0858
Fe+2	ND	0.0000
Fe+3	3.000	0.161.
Mg	8.800	1.7242
K	ND	0.0000
Na	28.000	1.2 90
NH4	ND	0.0000
TOTAL	181.800	9.1891

ANIC . ANALYSIS

ELEMENT	mg/L	meq/L
Cl	4.000	0.1128
F	0.700	0.03?3
SO4	115.000	2.3920
Alk	172.200	5.7400
NO2+NO3	ND	0.0000
TOTAL	291.900	8.2815

SUMMARY

% DIFFERENCE = 5.195
CATIONS + ANIONS (mg/L) = 473.700
TDS =540.000
HARDNESS = 391.080
CALCULATED THEORETICAL CONDUCTIVITY = 978.2662
MEASURED CONDUCTIVITY = 727.0000
THEORETICAL/MEASURED CONDUCTIVITY RATIO = 1.346
MEASURED CONDUCTIVITY/TDS RATIO = 1.346

ND - Not Detected

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #12

Laboratory ID: 64218-002 Enseco ID: 64218-002

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87 Analyzed: 08/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	0.56	ug/L	0.50
Toluene	0.58	ug/L	0.50
Xylene,m	N.D.	ug/L	0.50
Xylenes,o & p	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Enseco

METALS PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #12

Laboratory ID: 64218-002 Enseco ID: 64218-002

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	161	mg/L	0.1	200.7	08/20/87
Iron	7.8	mg/L	0.05	200.7	08/20/87
Magnesium	14	mg/L	0.1	200.7	08/20/87
Potassium	N.D.	mg/L	5	200.7	08/20/87
Sodium	62	mg/L	0.05	200.7	08/20/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64218-002

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #12

Laboratory ID: 64218-002 Enseco ID: 64218-002

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.55	units	0.01	150.1	08/05/87
Specific Conductance @ 25C	904	umhos/cm	1	120.1/9050	08/05/87
Total Dissolved Solids	660	mg/L	10	160.1	08/12/87
Fluoride	0.8	mg/L	0.1	340.2	08/18/87
Chloride	21	mg/L	3	300.0	08/09/87
Nitrate + Nitrite as N	0.2	mg/L	0.1	353.2	08/11/87
Sulfate	180	mg/L	5	300.0	08/09/87
Total Alkalinity as CaCO3	337	mg/L	5	310.1/403	08/05/87
Bicarb. Alkalinity as CaCO3	337	mg/L	5	310.1/403	08/05/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Ammonia as N	2.3	mg/L	0.1	350.1	08/11/87
Total Cations	12.5	meq/L	0.1	104C	08/24/87
Total Anions	11.1	meq/L	0.3	104C	08/24/87
% Difference	5.7	%	0.1	104C	08/24/87

N.D. = Not detected

Approved by: Lindsay Breyer

ION BALANCE RESULTS
for sample #64218002

CATION ANALYSIS

ELEMENT	mg/L	meq/L
Ca	161.000	8.0339
Fe+2	ND	0.0000
Fe+3	7.800	0.4189
Mg	14.000	1.1522
K	ND	0.0000
Na	62.000	2.6970
NH4	2.300	0.1643
TOTAL	247.100	12.4663

ANION ANALYSIS

ELEMENT	mg/L	meq/L
Cl	21.000	0.5922
F	0.800	0.0421
SO4	130.100	2.7441
HCO3	202.200	3.3141
NO3-NO3	0.200	0.0143
TOTAL	404.200	11.1324

SUMMARY

% DIFFERENCE = 5.651
CATIONS + ANIONS (mg/L) = 651.300
TDS =660.000
HARDNESS = 459.900
CALCULATED THEORETICAL CONDUCTIVITY =1333.6232
MEASURED CONDUCTIVITY = 904.0000
THEORETICAL/MEASURED CONDUCTIVITY RATIO = 1.475
MEASURED CONDUCTIVITY/TDS RATIO = 1.370

ND - Not Detected

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #13

Laboratory ID: 64218-003 Enseco ID: 64218-003

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87 Analyzed: 08/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	8.1	ug/L	0.50
Xylene,m	N.D.	ug/L	0.50
Xylenes,o & p	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Sample: 64218-003

Enseco

METALS PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #13

Laboratory ID: 64218-003 Enseco ID: 64218-003

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	230	mg/L	0.1	200.7	08/20/87
Iron	29	mg/L	0.05	200.7	08/20/87
Magnesium	25	mg/L	0.1	200.7	08/20/87
Potassium	5	mg/L	5	200.7	08/20/87
Sodium	92	mg/L	0.05	200.7	08/20/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #13

Laboratory ID: 64218-003 Enseco ID: 64218-003

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.18	units	0.01	150.1	08/05/87
Specific Conductance @ 25C	1240	umhos/cm	1	120.1/9050	08/05/87
Total Dissolved Solids	890	mg/L	10	160.1	08/12/87
Fluoride	0.8	mg/L	0.1	340.2	08/18/87
Chloride	10	mg/L	3	300.0	08/09/87
Nitrate + Nitrite as N	0.1	mg/L	0.1	353.2	08/11/87
Sulfate	154	mg/L	5	300.0	08/09/87
Total Alkalinity as CaCO3	656	mg/L	5	310.1/403	08/05/87
Bicarb. Alkalinity as CaCO3	656	mg/L	5	310.1/403	08/05/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Ammonia as N	1.0	mg/L	0.1	350.1	08/11/87
Total Cations	19.3	meq/L	0.1	104C	08/25/87
Total Anions	16.7	meq/L	0.3	104C	08/25/87
% Difference	7.3	%	0.1	104C	08/25/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 64218-003

ION BALANCE RESULTS
for sample #64218003

CATION ANALYSIS

ELEMENT	mg/L	meq/L
Ca	230.000	11.4770
Fe+2	ND	0.0000
Fe+3	29.000	1.5573
Mg	25.000	2.0575
K	5.000	0.1280
Na	92.000	4.0020
NH4	1.000	0.0714
TOTAL	382.000	19.2932

ANION ANALYSIS

ELEMENT	mg/L	meq/L
Cl	10.000	0.3821
F	0.800	0.0421
SO4	154.000	3.2133
Alk.	393.600	13.8711
NO2-NO3	0.100	0.0071
TOTAL	558.500	16.6544

SUMMARY

% DIFFERENCE = 7.341
CATIONS + ANIONS (mg/L) = 940.500
TDS =890.000
HARDNESS = 677.500
CALCULATED THEORETICAL CONDUCTIVITY =1871.3109
MEASURED CONDUCTIVITY =1240.0000
THEORETICAL/MEASURED CONDUCTIVITY RATIO = 1.509
MEASURED CONDUCTIVITY/TDS RATIO = 1.393

ND - Not Detected

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #14

Laboratory ID: 64218-004 Enseco ID: 64218-004

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87 Analyzed: 08/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	0.61	ug/L	0.50
Xylene,m	N.D.	ug/L	0.50
Xylenes,o & p	0.96	ug/L	0.50

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Sample: 64218-004

Enseco

METALS PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #14

Laboratory ID: 64218-004 Enseco ID: 64218-004

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	363	mg/L	0.1	200.7	08/20/87
Iron	70	mg/L	0.05	200.7	08/20/87
Magnesium	36	mg/L	0.1	200.7	08/20/87
Potassium	8	mg/L	5	200.7	08/20/87
Sodium	149	mg/L	0.05	200.7	08/20/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64218-004

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 #14

Laboratory ID: 64218-004 Enseco ID: 64218-004

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	7.44	units	0.01	150.1	08/05/87
Specific Conductance @ 25C	1760	umhos/cm	1	120.1/9050	08/05/87
Total Dissolved Solids	1230	mg/L	10	160.1	08/12/87
Fluoride	0.6	mg/L	0.1	340.2	08/18/87
Chloride	3	mg/L	3	300.0	08/09/87
Nitrate + Nitrite as N	N.D.	mg/L	0.1	353.2	08/11/87
Sulfate	42	mg/L	5	300.0	08/09/87
Total Alkalinity as CaCO3	1060	mg/L	5	310.1/403	08/05/87
Bicarb. Alkalinity as CaCO3	1060	mg/L	5	310.1/403	08/05/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Ammonia as N	1.1	mg/L	0.1	350.1	08/11/87
Total Cations	31.6	meq/L	0.1	104C	08/25/87
Total Anions	22.2	meq/L	0.3	104C	08/25/87
% Difference	17.5	%	0.1	104C	08/25/87

N.D. = Not detected

Approved by: Lindsay Breyer

ION BALANCE RESULTS
for sample #64218004

CATION ANALYSIS

ELEMENT	mg/L	meq/L
Ca	363.000	18.1137
Fe+2	ND	0.0000
Fe+3	70.000	3.7590
Mg	36.000	2.9626
K	8.000	0.2046
Na	149.000	6.4815
NH4	1.100	0.0795
TOTAL	627.100	31.6013

ANION ANALYSIS

ELEMENT	mg/L	meq/L
Cl	3.000	0.0846
F	0.[illegible]00	0.03[illegible]
SO4	42.000	0.87[illegible]
Alk	[illegible].000	21.[illegible]
NO2+NO3	ND	0.0000
TOTAL	681.600	22.1898

SUMMARY

% DIFFERENCE =17.495
CATIONS + ANIONS (mg/L) =1308.700
TDS =%1230.000
HARDNESS =1055.100
CALCULATED THEORETICAL CONDUCTIVITY =2602.3046
MEASURED CONDUCTIVITY =1760.0000
THEORETICAL/MEASURED CONDUCTIVITY RATIO = 1.479
MEASURED CONDUCTIVITY/TDS RATIO = 1.431

ND - Not Detected

VALDEZ A1
Results of August 7, 1987 Analysis

Monitoring Well #	11	12	13	14	Swamp Water
Elevation of water level (FT)	5462.22	5457.19	5456.23	5454.11	~~N.D.~~
Benzene ug/L	N.D.	N.D.	N.D.	N.D.	N.D.
Ethylbenzene ug/L	N.D.	0.56	N.D.	N.D.	N.D.
Toluene ug/L	N.D.	0.58	8.1	0.61	0.54
Xylene, m ug/L	N.D.	N.D.	N.D.	N.D.	N.D.
Xylene, o&p ug/L	N.D.	N.D.	N.D.	0.96	N.D.
pH	7.47	7.55	7.18	7.44	1.56
TDS mg/L	5.40	660	890	1230	920

Enseco

BENZENE/ TOLUENE/ ETHYLBENZENE/ XYLENES (BTX)

EPA METHOD 602

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 SWAMP WATER

Laboratory ID: 64218-005 Enseco ID: 64218-005

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87 Analyzed: 08/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	0.50
Ethylbenzene	N.D.	ug/L	0.50
Toluene	0.54	ug/L	0.50
Xylene,m	N.D.	ug/L	0.50
Xylenes,o & p	N.D.	ug/L	0.50

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Sample: 64218-005

Enseco

METALS PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 SWAMP WATER

Laboratory ID: 64218-005 Enseco ID: 64218-005

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Calcium	157	mg/L	0.1	200.7	08/20/87
Iron	N.D.	mg/L	0.05	200.7	08/20/87
Magnesium	15	mg/L	0.1	200.7	08/20/87
Potassium	N.D.	mg/L	5	200.7	08/20/87
Sodium	72	mg/L	0.05	200.7	08/20/87

N.D. = Not detected

Approved by: Will Pratt

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ A1 SWAMP WATER

Laboratory ID: 64218-005 Enseco ID: 64218-005

Matrix: Water Sampled: 08/04/87 Received: 08/05/87

Authorized: 08/05/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
pH	1.56	units	0.01	150.1	08/05/87
Specific Conductance @ 25C	19700	umhos/cm	1	120.1/9050	08/05/87
Total Dissolved Solids	920	mg/L	10	160.1	08/12/87
Fluoride	0.9	mg/L	0.1	340.2	08/18/87
Chloride	N.D.	mg/L	3	300.0	08/09/87
Nitrate + Nitrite as N	0.3	mg/L	0.1	353.2	08/11/87
Sulfate	171	mg/L	5	300.0	08/09/87
Total Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Bicarb. Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Carbonate Alkalinity as CaCO3	N.D.	mg/L	5	310.1/403	08/05/87
Ammonia as N	0.3	mg/L	0.1	350.1	08/19/87
Total Cations	12.2	meq/L	0.1	104C	08/25/87
Total Anions	3.6	meq/L	0.3	104C	08/25/87
% Difference	54.2	%	0.1	104C	08/25/87

N.D. = Not detected

Approved by: Lindsay Breyer

ION BALANCE RESULTS SMC
for sample #6421800 5

CATION ANALYSIS

ELEMENT	mg/L	meq/L
Ca	157.000	7.8343
Fe+2	ND	0.0000
Fe+3	ND	0.0000
Mg	15.000	1.2345
K	ND	0.0000
Na	72.000	3.1320
NH4	0.300	0.0214
TOTAL	244.300	12.2222

ANION ANALYSIS

ELEMENT	mg/L	meq/L
Cl	ND	0.0000
F	0.900	0.0473
SO4	171.000	3.5568
Alk	ND	0.0000
NO2+NO3	0.300	0.0214
TOTAL	172.200	3.6256

SUMMARY

% DIFFERENCE =54.245
CATIONS + ANIONS (mg/L) = 416.500
TDS =920.000
HARDNESS = 454.000
CALCULATED THEORETICAL CONDUCTIVITY = 978.3956
MEASURED CONDUCTIVITY =%19700.0000
THEORETICAL/MEASURED CONDUCTIVITY RATIO = 0.050
MEASURED CONDUCTIVITY/TDS RATIO = 21.413

ND - Not Detected

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #1

Laboratory ID: 63342-001 Enseco ID: 63342-001

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Total Dissolved Solids	550	mg/L	10	160.1	04/13/87
Nitrite as N	0.05	mg/L	0.01	353.2	04/04/87
Sulfate	123	mg/L	5	300.0	04/08/87
Sulfite	N.D.	mg/L	2	377.1	04/06/87
Oil & Grease	N.D.	mg/L	0.5	413.2	04/29/87

N.D. = Not detected

Approved by: Lindsay Breyer

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #2

Laboratory ID: 63342-002 Enseco ID: 63342-002

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Total Dissolved Solids	895	mg/L	10	160.1	04/13/87
Nitrite as N	0.03	mg/L	0.01	353.2	04/04/87
Sulfate	403	mg/L	5	300.0	04/08/87
Sulfite	N.D.	mg/L	2	377.1	04/06/87
Oil & Grease	2	mg/L	0.5	413.2	04/29/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63342-002

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #3

Laboratory ID: 63342-003 Enseco ID: 63342-003

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Total Dissolved Solids	840	mg/L	10	160.1	04/13/87
Nitrite as N	0.02	mg/L	0.01	353.2	04/04/87
Sulfate	270	mg/L	5	300.0	04/08/87
Sulfite	N.D.	mg/L	2	377.1	04/06/87
Oil & Grease	N.D.	mg/L	0.5	413.2	04/29/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63342-003

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #4

Laboratory ID: 63342-004 Enseco ID: 63342-004

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Total Dissolved Solids	1010	mg/L	10	160.1	04/13/87
Nitrite as N	0.05	mg/L	0.01	353.2	04/04/87
Sulfate	356	mg/L	5	300.0	04/08/87
Sulfite	N.D.	mg/L	2	377.1	04/06/87
Oil & Grease	N.D.	mg/L	0.5	413.2	04/29/87

N.D. = Not detected

Approved by: Lindsay Breyer

Sample: 63342-004

Enseco

INORGANIC PARAMETERS

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #5

Laboratory ID: 63342-005 Enseco ID: 63342-005

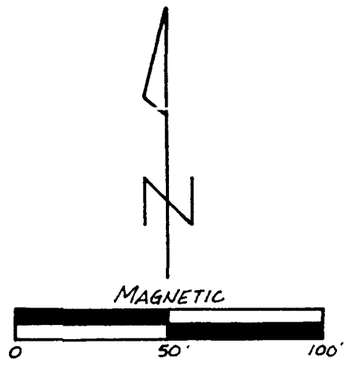
Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Analyzed
Total Dissolved Solids	785	mg/L	10	160.1	04/13/87
Nitrite as N	0.03	mg/L	0.01	353.2	04/04/87
Sulfate	278	mg/L	5	300.0	04/08/87
Sulfite	N.D.	mg/L	2	377.1	04/06/87
Oil & Grease	2	mg/L	0.5	413.2	04/29/87

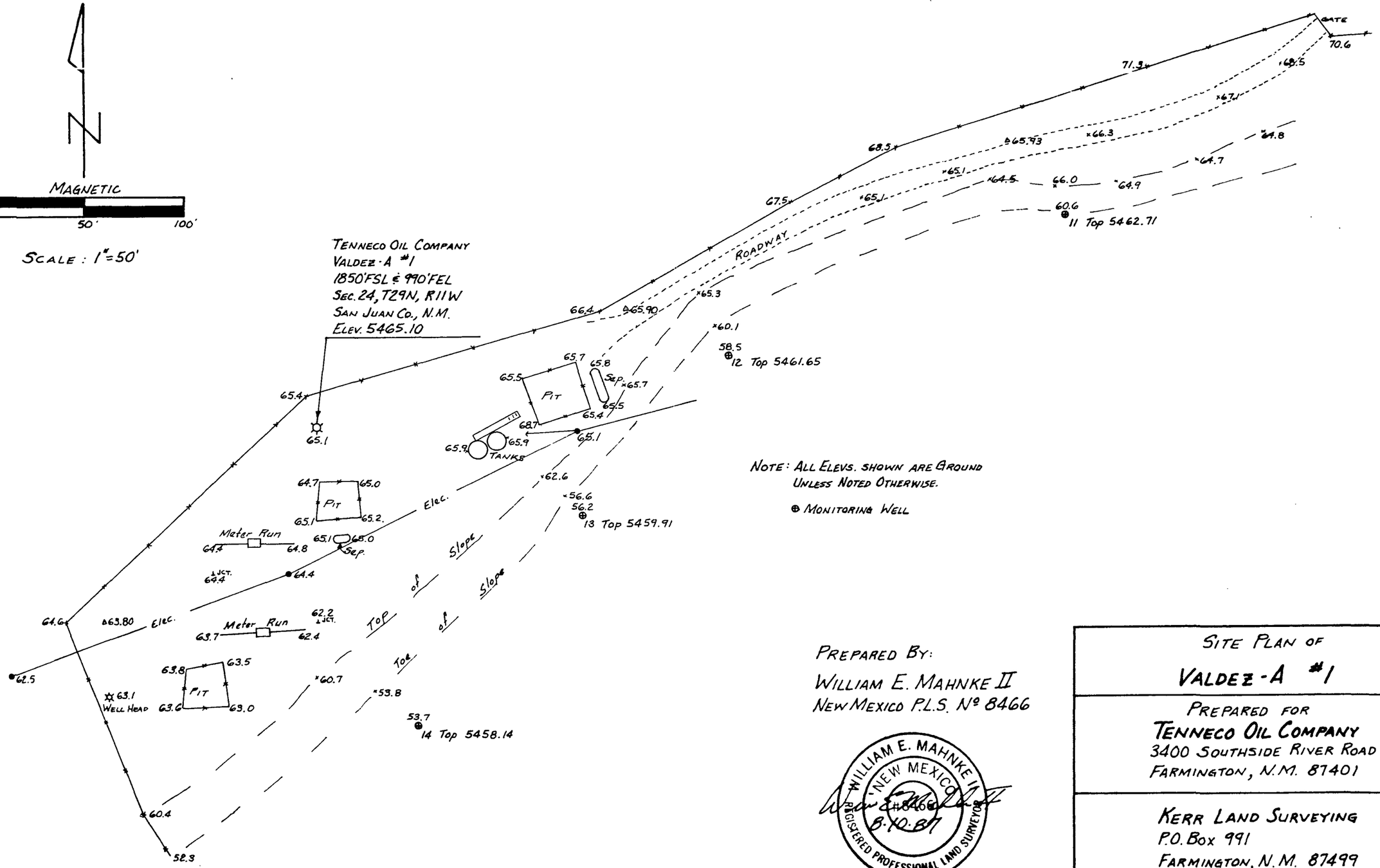
N.D. = Not detected

Approved by: Lindsay Breyer



SCALE : 1"=50'

TENNECO OIL COMPANY
VALDEZ-A #1
1850'FSL & 990'FEL
SEC. 24, T29N, R11W
SAN JUAN CO., N.M.
ELEV. 5465.10



NOTE: ALL ELEVS. SHOWN ARE GROUND UNLESS NOTED OTHERWISE.

⊕ MONITORING WELL

PREPARED BY:
WILLIAM E. MAHNKE II
NEW MEXICO P.L.S. Nº 8466

SITE PLAN OF
VALDEZ-A #1

PREPARED FOR
TENNECO OIL COMPANY
3400 SOUTHSIDE RIVER ROAD
FARMINGTON, N.M. 87401

KERR LAND SURVEYING
P.O. BOX 991
FARMINGTON, N.M. 87499

DRAWN BY: W.E.M.II | DATE: AUG. 10, 1987

FIELD DATE: AUG. 4, 1987

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address
6162 South Willow Drive
Englewood Colorado 80111

July 21, 1987

Mr. Tony Valdez
Route 3, Box 100
Bloomfield, New Mexico 87413

Dear Mr. Valdez:

We would like to meet with you and Jami Baily (NMOCD) and install several shallow monitoring wells adjacent to the Valdez A-1 well. We would like to do this on August 3, 1987.

At this time we will also review with you the results of the testing that has been done so far. Please contact me at (303) 740-2579 if you have any questions. I look forward to seeing you on August 3.

Very truly yours,

TENNECO OIL COMPANY

Marty Buys

Martin W. Buys
Staff Environmental/Safety Coordinator

MWB/cmf:2908a

cc: Jami Baily
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501-2088

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☐ Telephone ☒ Personal | Time 8:30 | Date 7/2/87

Originating Party	Other Parties
Tenneco - Marty Burgo	Dave Boyer, Jami Bailey

Subject: Valdez contamination case.

Discussion: Within the next couple of weeks, Tenneco will define lease boundaries, & make plans for installing permanent well points in swamp South of well site. One point will be upgradient from Auger Hole 5, 1 point generally South of A.H. 6, 1 point generally South of A.H. 4. Other points will be determined on site to define the contaminated area & determine contaminant movement. A surface water sample will be taken for VOC. Another sample will be taken for marginal ground water quality. -- Previous samples showed only dissolved hydrocarbons in water, no product.

Conclusions or Agreements: We will be notified of the scheduling for installing well points.

Distribution: Marty Burgo

Signed: Jami Bailey

Tenneco Oil Company
A Tenneco Company

Rocky Mountain Division
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address:
6162 South Willow Drive
Englewood, Colorado 80111

June 3, 1987

State of New Mexico
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Boyer

Dear Mr. Boyer:

Attached are two sets of analytical data plus a scale drawn site location map. The samples labeled Valdez #1 through Valdez #6 are the results of the work we did on April 2, 1987. The samples labeled Valdez #7 through Valdez #10 were taken on May 5, 1987.

The map which is drawn to scale was also done on May 5, 1987. The holes were dug using our 3" dia hand auger. All equipment was steam cleaned between holes. The information about each hole is listed on an attached sheet.

Holes #1, #4, #9 and #10 are free of volatile organics. Because of this I believe we have identified the area of contamination.

After you have reviewed the data please call me so we can discuss what further action is necessary.

Very truly yours,

TENNECO OIL COMPANY

Martin W. Buys

Martin W. Buys
Staff Environmental/Safety Coordinator

MWB/cmf:2850a

Attachments

IRRIGATED FIELD

1" = 20'
20 FT.

FENCE LINE

#1

ROAD →

well head ✱ VALdez A1

PRODUCED WATER PIT

SEPERATOR

de-hi PIT

De-HI

STOCK TANKS

#5

#7

#3

EDGE OF WELL PAD

#2

#6

#4

#8

#10

#9

Exceeds gw standards:

#2 Benzene, mpi xylene

#3 " , "

#5 "

#6 "

#8 " , ", toluene

Toluene only in #8, where highest values of xylenes found. Would you expect contamination next to #4?

TENNECO

CALCULATION SHEET

COMPANY TOC DEPT. Envir / Safety

SUBJECT

LOCATION Valdez, AK BY M. Berg DATE 5/5/87

#7
TD = 52"
DTW = 40"

smelly Hydro. Carbon odor
hole at edge of swamp

#8 TD = 54"
DTW = 38"

smelly, H.C. odor

#9
TD = 48"
DTW = 6"

no H.C. odor
at edge of swamp

#10 TD = 48"
DTW = 14"

no H.C. odor
at edge of swamp

TENNECO

CALCULATION SHEET

COMPANY DEPT.

SUBJECT

LOCATION BY DATE

Well #2

		1	2	3	4	5	6	7	8	9	10
Benzene	ug/L	N.D	87	600	N.D	N.D	N.D.	N.D.	380	N.D.	N.D
Ethylbenzene	ug/L	N.D	62	82	N.D.	110	N.D	N.D	N.D	N.D.	N.D.
m-Xylene	ug/L	N D	450	570	N.D.	790	400	420	2100	N.D.	N.D
o,p-Xylene	ug/L	N D	300	430	N.D	470	170	180	1300	N.D.	N.D
Toluene	ug/L	N D	N.D.	N.D.	N.D	N.D.	N.D.	N D	1100	N D	N.D.
TDS	mg/L	550	895	840	1010	785	—	—	—	—	—

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

547 A+B
S.L.D. No. OR- 548 A+B

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

DATE REC. 4-6-87

PRIORITY

PHONE(S): 327-5812

USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer

CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 4 0 2 1 0 4 5

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: _____ CODE: _____

COUNTY: SAN JUAN ; CITY: BLOOMFIELD CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 29N + 11W + 24 + 4 2 3 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☒ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☒ HEAD SPACE TEST
- ☐
- ☐
- ☐
- ☐

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: VALDEZ AUGER HOLE 1 UPGRADIENT

FIELD DATA:

pH= 7 ; Conductivity= 580 umho/cm at 14 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ _____/_____

Depth to water 91.5" ft.; Depth of well 125" ft.; Perforation Interval _____-_____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

N of PW TANK. BESIDE CATTLE FENCE UPGRADIENT HOLE Valdez A #1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jamie Boyer Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- ☒ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____ _____

For OCD Use: Date Owner Notified _____ Phone or Letter? _____ Initials _____

29N-11W-24.423

ANALYSES PERFORMED

LAB. No.: OR- 547,548

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
HEADSPACE - ALL LESS than 5 ppm			
		aromatic purgeables	ND
		halogenated purgeables	ND
* DETECTION LIMIT *	5 ppm	+ DETECTION LIMIT +	5ppb

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: One other compound was detected by the aromatic screen that was not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [x] No [ ]. Seal(s) broken by: C.S. Ramey date: 4/13/87

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4/13/87 4-24-87 Analyst's signature: C.S. Ramey G. Tinney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K. Meyer Lee MAY 18 1987

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

MAY 14 1987

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

859 WTR

DATE RECEIVED 4 6 87	LAB NO. WC 1072	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 4 10 87	SITE INFORM-ATION	Sample location VALDEZ AUGER HOLE 1	
Collection TIME 1045		Collection site description DIRECTLY N of PW TANK. BESIDE CATTLE FENCE. UPGRADIENT HOLE	
Collected by — Person/Agency BAILEY / BOYER / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/well code: Valdez A #1
Owner:

SAMPLING CONDITIONS

☒ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level DTW 91.5"	Discharge	Sample type
pH (00400) 7	Conductivity (Uncorrected) 580 µmho	Water Temp. (00010) 14 °C	Conductivity at 25°C (00094) µmho

Field comments: TD 125"

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☐ Other:		
☐ Other:		
☐ Other:		

A-H_2SO_4		
☐ Nitrate-N + , Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

From ~~F~~, NA Sample:

			Date Analyzed
☒	Calcium	120 mg/l	4/28
☒	Potassium	1.56 mg/l	4/5
☒	Magnesium	6.1 mg/l	11
☒	Sodium	25.3 mg/l	4/26
☒	Bicarbonate	325 mg/l	4/14
☒	Chloride	< 5 mg/l	4/21
☒	Sulfate	117 mg/l	4/29
☒	Total Solids	466 mg/l	4/21
☐			
☐			
☒	Cation/Anion Balance		

Analyst | Date Reported: 4/30/87 | Reviewed by

Laboratory remarks:

FOR OCD USE -- Date Owner Notified _____ Phone or Letter? _____ Initals _____

CATIONS				ANIONS		
ANALYTE	MEQ.	PPM	DET.LIMIT	ANALYTE	MEQ.	PPM
Ca	5.99	120.00	< 3.0	HCO3	5.33	325.00
Mg	0.50	6.10	< 10.0	S04	2.44	117.00
Na	1.10	25.30	< 10.0	Cl	0.14	5.00
K	0.04	1.56	< 0.5			
Mn	0.00	0.00		NO3	0.00	0.00
Fe	0.00	0.00		CO3	0.00	0.00
				NH3	0.00	0.00
				PO4	0.00	0.00
SUMS	7.63	152.96			7.90	447.00

TDS(measured) = 466.00 ppm

Ion Balance = 96.52%

Sample No. =8701072

Date out/By CO 4/30

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO ENVIRONMENT

[redacted]

TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 545 A+B / 546 A+B
DATE REC. 4-6-87
PRIORITY

PHONE(S): 827-5812
USER CODE: 82235
SUBMITTER: David Boyer
CODE: 260

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 870402121453

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: _____ CODE: _____

COUNTY: SAN JUAN ; CITY: BLOOMFIELD CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 29N+11W+04+4213 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☒ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☒ HEAD SPACE
- ☐
- ☐
- ☐
- ☐

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: VALDEZ AUGER HOLE 2

FIELD DATA:

pH= 7.5; Conductivity= 960 umho/cm at 18 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ ____/____

Depth to water 63" ft.; Depth of well 124" ft.; Perforation Interval ____-____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

S of PW TANK ON SLOPE DOWN TO MARSH Valdez #1
HC ODOR + STAIN W/in 8" OF SURFACE

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jami Bailey Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- ☒ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____ _____

For OCD Use: Date Owner Notified _____ Phone or Letter? _____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 545, 546

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC.	COMPOUND(S) DETECTED	CONC. [PPB]
Headspace - Methane	2600 ppm		
Ethane	25 ppm	halogenated purgeables	ND
Propane	18 ppm		
Isobutane	90 ppm	benzene	270
n-butane	340 ppm	toluene	ND
Isopentane	2400 ppm	ethylbenzene	160
Pentane	2700 ppm	p-xylene	470
		m-xylene	1540
		o-xylene	330
* DETECTION LIMIT * *	5 ppm	+ DETECTION LIMIT + +	5 ppb

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Trace amounts of ten other compounds were detected by the aromatic screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [x] No [ ]. Seal(s) broken by: A Bussey date: 4/13/87

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4/13/87 4-24-87 Analyst's signature: A Bussey M Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhen MAY 18 1987

859
474

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 4 | 6 | 87	LAB NO. WC 1073	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 4 | 2 | 87	SITE INFORM-ATION ►	Sample location VALDEZ AUGER HOLE 2	
Collection TIME 1245		Collection site description S of PIT TANK ON SLOPE DOWN TO MARSH	
Collected by — Person/Agency BOYER/BAILEY / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

MAY 14 1987

Attn: David Boyer

Phone: 827-5812

Station/well code: Valdez #2
Owner:

SAMPLING CONDITIONS

☒ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level DTW 63'	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) 960 µmho	Water Temp. (00010) 18 °C	Conductivity at 25°C (00094) µmho

Field comments: TD 124'. HC ODOR + STAIN WITHIN 8" OF SURFACE

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☐ Other:		
☐ Other:		
☐ Other:		

A-H_2SO_4		
☐ Nitrate-N + , Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

From PF, NA Sample:

			Date Analyzed
☒ Calcium	110	mg/l	
☒ Potassium	4.07	mg/l	4/15
☒ Magnesium	7.32	mg/l	
☒ Sodium	52.9	mg/l	11
☒ Bicarbonate	324	mg/l	4/15
☒ Chloride	14	mg/l	4/21
☒ Sulfate	120	mg/l	4/29
☒ Total Solids	506	mg/l	4/21
☐			
☐			
☒ Cation/Anion Balance			

Analyst	Date Reported	Reviewed by
	4 | 30 | 87	

Laboratory remarks:

FOR OCD USE -- Date Owner Notified _____ Phone or Letter? _____ Initals _____

CATIONS				ANIONS		
ANALYTE	MEQ.	PPM	DET.LIMIT	ANALYTE	MEQ.	PPM
Ca	5.49	110.00	< 3.0	HCO3	5.31	324.00
Mg	0.60	7.32	< 10.0	S04	2.50	120.00
Na	2.30	52.90	< 10.0	Cl	0.39	14.00
K	0.10	4.07	< 0.5			
Mn	0.00	0.00		NO3	0.00	0.00
Fe	0.00	0.00		CO3	0.00	0.00
				NH3	0.00	0.00
				PO4	0.00	0.00
SUMS	8.50	174.29			8.20	458.00

TDS(measured) = 506.00 ppm

Ion Balance = 103.54%

Sample No. =8701073
Date out/By CD 4/30

87-0543-C

87-0544-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

753
754

wpn

To: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 543 A+B / 544 A+B
DATE REC. 4-6-87
PRIORITY ______

PHONE(S): 327-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 4 0 2 1 2 0 0 AB

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: ______ CODE: ______

COUNTY: SAN JUAN; CITY: BLOOMFIELD CODE: ______

LOCATION CODE: (Township-Range-Section-Tracts) 29N + 11W + 24 + 4 2 3 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [X] HEAD SPACE
- [ ] ______
- [ ] ______
- [ ] ______
- [ ] ______

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: VALDEZ AUGER HOLE 3

FIELD DATA:

pH= 7.+; Conductivity= 830 umho/cm at 15 °C; Chlorine Residual= ______ mg/l

Dissolved Oxygen= ______ mg/l; Alkalinity= ______ mg/l; Flow Rate ______ ___/___

Depth to water 47" ft.; Depth of well 75" ft.; Perforation Interval ___-___ ft.; Casing: ______

Sampling Location, Methods and Remarks (i.e. odors, etc.)

S of PRODUCTION TANKS ON SLOPE DOWN TO MARSH
HC ODOR + STAIN W/in 8" of SURFACE Valdez A#1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): [signature] Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ______ Glass Jugs, and/or ______ ______

Samples were preserved as follows:

- [X] NP: No Preservation; Sample stored at room temperature.
- [ ] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from ______ to ______

at (location) ______ on ___/___/___ - ___:___ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures ______

For OCD Use: Date Owner Notified ______ Phone or Letter? ______ Initials ______

ANALYSES PERFORMED

LAB. No.: OR- 543,544

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [X] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
Headspace - Methane	2500ppm		
- Others	< 5ppm	halogenated purgeables	ND
		benzene	310
		toluene	ND
		ethylbenzene	25
		p-xylene	170
		m-xylene	550
		o-xylene	160
* DETECTION LIMIT *	5	+ DETECTION LIMIT +	5ppb

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Three other compounds were detected by the aromatic screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [X] No [ ]. Seal(s) broken by: A Burney date: 4/13/87

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4/13/87 4-24-87 Analyst's signature: A Burney M Tinney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhoff MAY 18 1987

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

[redacted]

[redacted]

David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 541 A+B / 542 A+B
DATE REC. 4-6-87
PRIORITY

PHONE(S): 327-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 4 0 2 1 3 4 5 GB

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER:_____ CODE:

COUNTY: SAN JUAN ; CITY: _____ CODE:

LOCATION CODE: (Township-Range-Section-Tracts) 2 9 N + 1 1 W + 2 4 + 4 2 3 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☒ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☒ HEAD SPACE
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: VALVEZ AUGER HOLE 4
5 OF DEHY ON LINE W/ HOLES 2 + 3

FIELD DATA:

pH= 7 ; Conductivity= 1050 umho/cm at 15 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water 80 " ft; Depth of well 123 " ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

MONTMORILLONITE TO TD. LITTLE FLUID ENTERING HOLE
NO HC ODOR OR STAIN Valdez A #1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jami Bailey Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- ☒ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____ 3 _____

For OCD Use: Date Owner Notified _____ Phone or Letter?_____ Initials _____

87-0634

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

87-0636

TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 539 A+B / 540 A+B

DATE REC. 4-6-87

PRIORITY

PHONE(S): 327-5812

USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer

CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 4 0 2 1 4 4 0 [illegible]

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER:_____ CODE:

COUNTY: SAN JUAN ; CITY: BLOOMFIELD CODE:

LOCATION CODE: (Township-Range-Section-Tracts) 2 9 N + 1 1 W + 2 4 + 4 2 3 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☒ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☒ HEAD SPACE
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: VALDEZ AUGER HOLE 5
ESE of PRODUCTION UNIT ON SLOPE TO MARSH

FIELD DATA:

pH= 7 ; Conductivity= 780 umho/cm at 11.5 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water 64" ft.; Depth of well 115" ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

UP CHANNEL FROM HOLES 2, 3, 4
HC ODOR + STAIN Valdez #1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): [signature] Method of Shipment to the Lab:_____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- ☒ NP: No Preservation; Sample stored at room temperature.
- ☐ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ $P_2Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ Seals Intact: Yes ☐ No ☐

Signatures _____ TSO _____

For OCD Use: Date Owner Notified _____ Phone or Letter?_____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 537,538

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC.	COMPOUND(S) DETECTED	CONC. [PPB]
Headspace - Methane	10500 ppm		
- Others less than 5 ppm			
		halogenated purgeables	ND
		benzene	18
		toluene	ND
		ethylbenzene	ND
		p-xylene	92
		m-xylene	300
		o-xylene	ND
* DETECTION LIMIT *	* 5	+ DETECTION LIMIT +	+ 5 ppb

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Trace amounts of five other compounds were detected by the aromatic screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [x] No [ ]. Seal(s) broken by: C Barney date: 4/20/87

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4/13/87 4-24-87 Analyst's signature: C S Barney J T Tinney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen MAY 18 1987

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

537 AAB
S.L.D. No. OR- 538 AAB
DATE REC. 4-6-87

TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

PRIORITY

PHONE(S): 327-5812
USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 4 0 2 1 4 4 5

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: SAN JUAN ; CITY: BLOOMFIELD CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 2 9 N + 1 1 W + 2 4 + 4 2 3 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [X] HEAD SPACE
- [ ]
- [ ]
- [ ]
- [ ]

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: VALDEZ AUGER HOLE 6
S OF HOLE 2 ON EDGE OF MARSH

FIELD DATA:

pH= 7.+ ; Conductivity= 600 umho/cm at 11 °C; Chlorine Residual= _____ mg/l

Dissolved Oxygen= _____ mg/l; Alkalinity= _____ mg/l; Flow Rate _____ _____/_____

Depth to water 32" ft.; Depth of well 51" ft.; Perforation Interval _____-_____ ft.; Casing: _____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

HC STAIN + ODOR
Valdez A #1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector) Jamie Boyle Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [X] NP: No Preservation; Sample stored at room temperature.
- [ ] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____/_____/_____ - _____:_____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ TOD: 21 1AM

For OCD Use: Date Owner Notified _____ Phone or Letter? _____ Initials _____

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #1

Laboratory ID: 63342-001 Enseco ID: 63342-001

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/07/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	5.0
Bromoform	N.D.	ug/L	5.0
Carbon tetrachloride	N.D.	ug/L	5.0
Chlorobenzene	N.D.	ug/L	5.0
Dibromochloromethane	N.D.	ug/L	5.0
Chloroethane	N.D.	ug/L	10
2-Chloroethylvinyl ether	N.D.	ug/L	10
Chloroform	N.D.	ug/L	5.0
Bromodichloromethane	N.D.	ug/L	5.0
1,1-Dichloroethane	N.D.	ug/L	5.0
1,2-Dichloroethane	N.D.	ug/L	5.0
1,1-Dichloroethene	N.D.	ug/L	5.0
1,2-Dichloropropane	N.D.	ug/L	5.0
Ethylbenzene	N.D.	ug/L	5.0
Methylbromide	N.D.	ug/L	10
Chloromethane	N.D.	ug/L	10
Methylene chloride	N.D.	ug/L	25
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0
Tetrachloroethylene	N.D.	ug/L	5.0
Toluene	N.D.	ug/L	5.0
trans-1,2-Dichloroethene	N.D.	ug/L	5.0
1,1,1-Trichloroethane	N.D.	ug/L	5.0
1,1,2-Trichloroethane	N.D.	ug/L	5.0
Trichloroethylene	N.D.	ug/L	5.0
Vinyl chloride	N.D.	ug/L	10
m-Xylene	N.D.	ug/L	5.0
o & p-Xylenes	N.D.	ug/L	5.0
cis-1,3-Dichloropropene	N.D.	ug/L	5.0
trans-1,3-Dichloropropene	N.D.	ug/L	5.0

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #2

Laboratory ID: 63342-002 Enseco ID: 63342-002

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/08/87

Parameter	Result	Units	Reporting Limit
Benzene	87	ug/L	40
Bromoform	N.D.	ug/L	40
Carbon tetrachloride	N.D.	ug/L	40
Chlorobenzene	N.D.	ug/L	40
Dibromochloromethane	N.D.	ug/L	40
Chloroethane	N.D.	ug/L	80
2-Chloroethylvinyl ether	N.D.	ug/L	80
Chloroform	N.D.	ug/L	40
Bromodichloromethane	N.D.	ug/L	40
1,1-Dichloroethane	N.D.	ug/L	40
1,2-Dichloroethane	N.D.	ug/L	40
1,1-Dichloroethene	N.D.	ug/L	40
1,2-Dichloropropane	N.D.	ug/L	40
Ethylbenzene	62	ug/L	40
Methylbromide	N.D.	ug/L	80
Chloromethane	N.D.	ug/L	80
Methylene chloride	N.D.	ug/L	200
1,1,2,2-Tetrachloroethane	N.D.	ug/L	40
Tetrachloroethylene	N.D.	ug/L	40
Toluene	N.D.	ug/L	40
trans-1,2-Dichloroethene	N.D.	ug/L	40
1,1,1-Trichloroethane	N.D.	ug/L	40
1,1,2-Trichloroethane	N.D.	ug/L	40
Trichloroethylene	N.D.	ug/L	40
Vinyl chloride	N.D.	ug/L	80
m-Xylene	450	ug/L	40
o & p-Xylenes	300	ug/L	40
cis-1,3-Dichloropropene	N.D.	ug/L	40
trans-1,3-Dichloropropene	N.D.	ug/L	40

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #3

Laboratory ID: 63342-003 Enseco ID: 63342-003

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/08/87

Parameter	Result	Units	Reporting Limit
Benzene	600	ug/L	40
Bromoform	N.D.	ug/L	40
Carbon tetrachloride	N.D.	ug/L	40
Chlorobenzene	N.D.	ug/L	40
Dibromochloromethane	N.D.	ug/L	40
Chloroethane	N.D.	ug/L	80
2-Chloroethylvinyl ether	N.D.	ug/L	80
Chloroform	N.D.	ug/L	40
Bromodichloromethane	N.D.	ug/L	40
1,1-Dichloroethane	N.D.	ug/L	40
1,2-Dichloroethane	N.D.	ug/L	40
1,1-Dichloroethene	N.D.	ug/L	40
1,2-Dichloropropane	N.D.	ug/L	40
Ethylbenzene	82	ug/L	40
Methylbromide	N.D.	ug/L	80
Chloromethane	N.D.	ug/L	80
Methylene chloride	N.D.	ug/L	200
1,1,2,2-Tetrachloroethane	N.D.	ug/L	40
Tetrachloroethylene	N.D.	ug/L	40
Toluene	N.D.	ug/L	40
trans-1,2-Dichloroethene	N.D.	ug/L	40
1,1,1-Trichloroethane	N.D.	ug/L	40
1,1,2-Trichloroethane	N.D.	ug/L	40
Trichloroethylene	N.D.	ug/L	40
Vinyl chloride	N.D.	ug/L	80
m-Xylene	570	ug/L	40
o & p-Xylenes	430	ug/L	40
cis-1,3-Dichloropropene	N.D.	ug/L	40
trans-1,3-Dichloropropene	N.D.	ug/L	40

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #4

Laboratory ID: 63342-004 Enseco ID: 63342-004

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/07/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	5.0
Bromoform	N.D.	ug/L	5.0
Carbon tetrachloride	N.D.	ug/L	5.0
Chlorobenzene	N.D.	ug/L	5.0
Dibromochloromethane	N.D.	ug/L	5.0
Chloroethane	N.D.	ug/L	10
2-Chloroethylvinyl ether	N.D.	ug/L	10
Chloroform	N.D.	ug/L	5.0
Bromodichloromethane	N.D.	ug/L	5.0
1,1-Dichloroethane	N.D.	ug/L	5.0
1,2-Dichloroethane	N.D.	ug/L	5.0
1,1-Dichloroethene	N.D.	ug/L	5.0
1,2-Dichloropropane	N.D.	ug/L	5.0
Ethylbenzene	N.D.	ug/L	5.0
Methylbromide	N.D.	ug/L	10
Chloromethane	N.D.	ug/L	10
Methylene chloride	N.D.	ug/L	25
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0
Tetrachloroethylene	N.D.	ug/L	5.0
Toluene	N.D.	ug/L	5.0
trans-1,2-Dichloroethene	N.D.	ug/L	5.0
1,1,1-Trichloroethane	N.D.	ug/L	5.0
1,1,2-Trichloroethane	N.D.	ug/L	5.0
Trichloroethylene	N.D.	ug/L	5.0
Vinyl chloride	N.D.	ug/L	10
m-Xylene	N.D.	ug/L	5.0
o & p-Xylenes	N.D.	ug/L	5.0
cis-1,3-Dichloropropene	N.D.	ug/L	5.0
trans-1,3-Dichloropropene	N.D.	ug/L	5.0

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #5

Laboratory ID: 63342-005 Enseco ID: 63342-005

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/08/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	80
Bromoform	N.D.	ug/L	80
Carbon tetrachloride	N.D.	ug/L	80
Chlorobenzene	N.D.	ug/L	80
Dibromochloromethane	N.D.	ug/L	80
Chloroethane	N.D.	ug/L	160
2-Chloroethylvinyl ether	N.D.	ug/L	160
Chloroform	N.D.	ug/L	80
Bromodichloromethane	N.D.	ug/L	80
1,1-Dichloroethane	N.D.	ug/L	80
1,2-Dichloroethane	N.D.	ug/L	80
1,1-Dichloroethene	N.D.	ug/L	80
1,2-Dichloropropane	N.D.	ug/L	80
Ethylbenzene	110	ug/L	80
Methylbromide	N.D.	ug/L	160
Chloromethane	N.D.	ug/L	160
Methylene chloride	N.D.	ug/L	400
1,1,2,2-Tetrachloroethane	N.D.	ug/L	80
Tetrachloroethylene	N.D.	ug/L	80
Toluene	N.D.	ug/L	80
trans-1,2-Dichloroethene	N.D.	ug/L	80
1,1,1-Trichloroethane	N.D.	ug/L	80
1,1,2-Trichloroethane	N.D.	ug/L	80
Trichloroethylene	N.D.	ug/L	80
Vinyl chloride	N.D.	ug/L	160
m-Xylene	790	ug/L	80
o & p-Xylenes	470	ug/L	80
cis-1,3-Dichloropropene	N.D.	ug/L	80
trans-1,3-Dichloropropene	N.D.	ug/L	80

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ AUGER #6

Laboratory ID: 63342-006 Enseco ID: 63342-006

Matrix: Water Sampled: 04/02/87 Received: 04/03/87

Authorized: 04/03/87 Analyzed: 04/08/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	25
Bromoform	N.D.	ug/L	25
Carbon tetrachloride	N.D.	ug/L	25
Chlorobenzene	N.D.	ug/L	25
Dibromochloromethane	N.D.	ug/L	25
Chloroethane	N.D.	ug/L	50
2-Chloroethylvinyl ether	N.D.	ug/L	50
Chloroform	N.D.	ug/L	25
Bromodichloromethane	N.D.	ug/L	25
1,1-Dichloroethane	N.D.	ug/L	25
1,2-Dichloroethane	N.D.	ug/L	25
1,1-Dichloroethene	N.D.	ug/L	25
1,2-Dichloropropane	N.D.	ug/L	25
Ethylbenzene	N.D.	ug/L	25
Methylbromide	N.D.	ug/L	50
Chloromethane	N.D.	ug/L	50
Methylene chloride	N.D.	ug/L	120
1,1,2,2-Tetrachloroethane	N.D.	ug/L	25
Tetrachloroethylene	N.D.	ug/L	25
Toluene	N.D.	ug/L	25
trans-1,2-Dichloroethene	N.D.	ug/L	25
1,1,1-Trichloroethane	N.D.	ug/L	25
1,1,2-Trichloroethane	N.D.	ug/L	25
Trichloroethylene	N.D.	ug/L	25
Vinyl chloride	N.D.	ug/L	50
m-Xylene	400	ug/L	25
o & p-Xylenes	170	ug/L	25
cis-1,3-Dichloropropene	N.D.	ug/L	25
trans-1,3-Dichloropropene	N.D.	ug/L	25

N.D. = Not detected

Reported by: Alan Alai Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ #7

Laboratory ID: 63564-001 Enseco ID: 63564-001

Matrix: Water Sampled: 05/05/87 Received: 05/07/87

Authorized: 05/07/87 Analyzed: 05/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	50
Bromoform	N.D.	ug/L	50
Carbon tetrachloride	N.D.	ug/L	50
Chlorobenzene	N.D.	ug/L	50
Dibromochloromethane	N.D.	ug/L	50
Chloroethane	N.D.	ug/L	100
2-Chloroethylvinyl ether	N.D.	ug/L	100
Chloroform	N.D.	ug/L	50
Bromodichloromethane	N.D.	ug/L	50
1,1-Dichloroethane	N.D.	ug/L	50
1,2-Dichloroethane	N.D.	ug/L	50
1,1-Dichloroethene	N.D.	ug/L	50
1,2-Dichloropropane	N.D.	ug/L	50
Ethylbenzene	N.D.	ug/L	50
Methylbromide	N.D.	ug/L	100
Chloromethane	N.D.	ug/L	100
Methylene chloride	N.D.	ug/L	250
1,1,2,2-Tetrachloroethane	N.D.	ug/L	50
Tetrachloroethylene	N.D.	ug/L	50
Toluene	N.D.	ug/L	50
trans-1,2-Dichloroethene	N.D.	ug/L	50
1,1,1-Trichloroethane	N.D.	ug/L	50
1,1,2-Trichloroethane	N.D.	ug/L	50
Trichloroethylene	N.D.	ug/L	50
Vinyl chloride	N.D.	ug/L	100
m-Xylene	420	ug/L	50
o & p-Xylenes	180	ug/L	50
cis-1,3-Dichloropropene	N.D.	ug/L	50
trans-1,3-Dichloropropene	N.D.	ug/L	50

N.D. = Not detected

Reported by: Stephen Siegal Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ #8

Laboratory ID: 63564-002 Enseco ID: 63564-002

Matrix: Water Sampled: 05/05/87 Received: 05/07/87

Authorized: 05/07/87 Analyzed: 05/11/87

Parameter	Result	Units	Reporting Limit
Benzene	380	ug/L	320
Bromoform	N.D.	ug/L	320
Carbon tetrachloride	N.D.	ug/L	320
Chlorobenzene	N.D.	ug/L	320
Dibromochloromethane	N.D.	ug/L	320
Chloroethane	N.D.	ug/L	640
2-Chloroethylvinyl ether	N.D.	ug/L	640
Chloroform	N.D.	ug/L	320
Bromodichloromethane	N.D.	ug/L	320
1,1-Dichloroethane	N.D.	ug/L	320
1,2-Dichloroethane	N.D.	ug/L	320
1,1-Dichloroethene	N.D.	ug/L	320
1,2-Dichloropropane	N.D.	ug/L	320
Ethylbenzene	N.D.	ug/L	320
Methylbromide	N.D.	ug/L	640
Chloromethane	N.D.	ug/L	640
Methylene chloride	N.D.	ug/L	1600
1,1,2,2-Tetrachloroethane	N.D.	ug/L	320
Tetrachloroethylene	N.D.	ug/L	320
Toluene	1100	ug/L	320
trans-1,2-Dichloroethene	N.D.	ug/L	320
1,1,1-Trichloroethane	N.D.	ug/L	320
1,1,2-Trichloroethane	N.D.	ug/L	320
Trichloroethylene	N.D.	ug/L	320
Vinyl chloride	N.D.	ug/L	640
m-Xylene	2100	ug/L	320
o & p-Xylenes	1300	ug/L	320
cis-1,3-Dichloropropene	N.D.	ug/L	320
trans-1,3-Dichloropropene	N.D.	ug/L	320

N.D. = Not detected

Reported by: Stephen Siegal Approved by: Michael Brooks

Sample: 63564-002

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ #9

Laboratory ID: 63564-003 Enseco ID: 63564-003

Matrix: Water Sampled: 05/05/87 Received: 05/07/87

Authorized: 05/07/87 Analyzed: 05/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	5.0
Bromoform	N.D.	ug/L	5.0
Carbon tetrachloride	N.D.	ug/L	5.0
Chlorobenzene	N.D.	ug/L	5.0
Dibromochloromethane	N.D.	ug/L	5.0
Chloroethane	N.D.	ug/L	10
2-Chloroethylvinyl ether	N.D.	ug/L	10
Chloroform	N.D.	ug/L	5.0
Bromodichloromethane	N.D.	ug/L	5.0
1,1-Dichloroethane	N.D.	ug/L	5.0
1,2-Dichloroethane	N.D.	ug/L	5.0
1,1-Dichloroethene	N.D.	ug/L	5.0
1,2-Dichloropropane	N.D.	ug/L	5.0
Ethylbenzene	N.D.	ug/L	5.0
Methylbromide	N.D.	ug/L	10
Chloromethane	N.D.	ug/L	10
Methylene chloride	N.D.	ug/L	25
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0
Tetrachloroethylene	N.D.	ug/L	5.0
Toluene	N.D.	ug/L	5.0
trans-1,2-Dichloroethene	N.D.	ug/L	5.0
1,1,1-Trichloroethane	N.D.	ug/L	5.0
1,1,2-Trichloroethane	N.D.	ug/L	5.0
Trichloroethylene	N.D.	ug/L	5.0
Vinyl chloride	N.D.	ug/L	10
m-Xylene	N.D.	ug/L	5.0
o & p-Xylenes	N.D.	ug/L	5.0
cis-1,3-Dichloropropene	N.D.	ug/L	5.0
trans-1,3-Dichloropropene	N.D.	ug/L	5.0

N.D. = Not detected

Reported by: Stephen Siegal Approved by: Michael Brooks

Enseco

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA METHOD 624

Client Name: TENNECO OIL COMPANY

Client ID: VALDEZ #10

Laboratory ID: 63564-004 Enseco ID: 63564-004

Matrix: Water Sampled: 05/05/87 Received: 05/07/87

Authorized: 05/07/87 Analyzed: 05/11/87

Parameter	Result	Units	Reporting Limit
Benzene	N.D.	ug/L	5.0
Bromoform	N.D.	ug/L	5.0
Carbon tetrachloride	N.D.	ug/L	5.0
Chlorobenzene	N.D.	ug/L	5.0
Dibromochloromethane	N.D.	ug/L	5.0
Chloroethane	N.D.	ug/L	10
2-Chloroethylvinyl ether	N.D.	ug/L	10
Chloroform	N.D.	ug/L	5.0
Bromodichloromethane	N.D.	ug/L	5.0
1,1-Dichloroethane	N.D.	ug/L	5.0
1,2-Dichloroethane	N.D.	ug/L	5.0
1,1-Dichloroethene	N.D.	ug/L	5.0
1,2-Dichloropropane	N.D.	ug/L	5.0
Ethylbenzene	N.D.	ug/L	5.0
Methylbromide	N.D.	ug/L	10
Chloromethane	N.D.	ug/L	10
Methylene chloride	N.D.	ug/L	25
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0
Tetrachloroethylene	N.D.	ug/L	5.0
Toluene	N.D.	ug/L	5.0
trans-1,2-Dichloroethene	N.D.	ug/L	5.0
1,1,1-Trichloroethane	N.D.	ug/L	5.0
1,1,2-Trichloroethane	N.D.	ug/L	5.0
Trichloroethylene	N.D.	ug/L	5.0
Vinyl chloride	N.D.	ug/L	10
m-Xylene	N.D.	ug/L	5.0
o & p-Xylenes	N.D.	ug/L	5.0
cis-1,3-Dichloropropene	N.D.	ug/L	5.0
trans-1,3-Dichloropropene	N.D.	ug/L	5.0

N.D. = Not detected

Reported by: Stephen Siegal Approved by: Michael Brooks

2-11-87

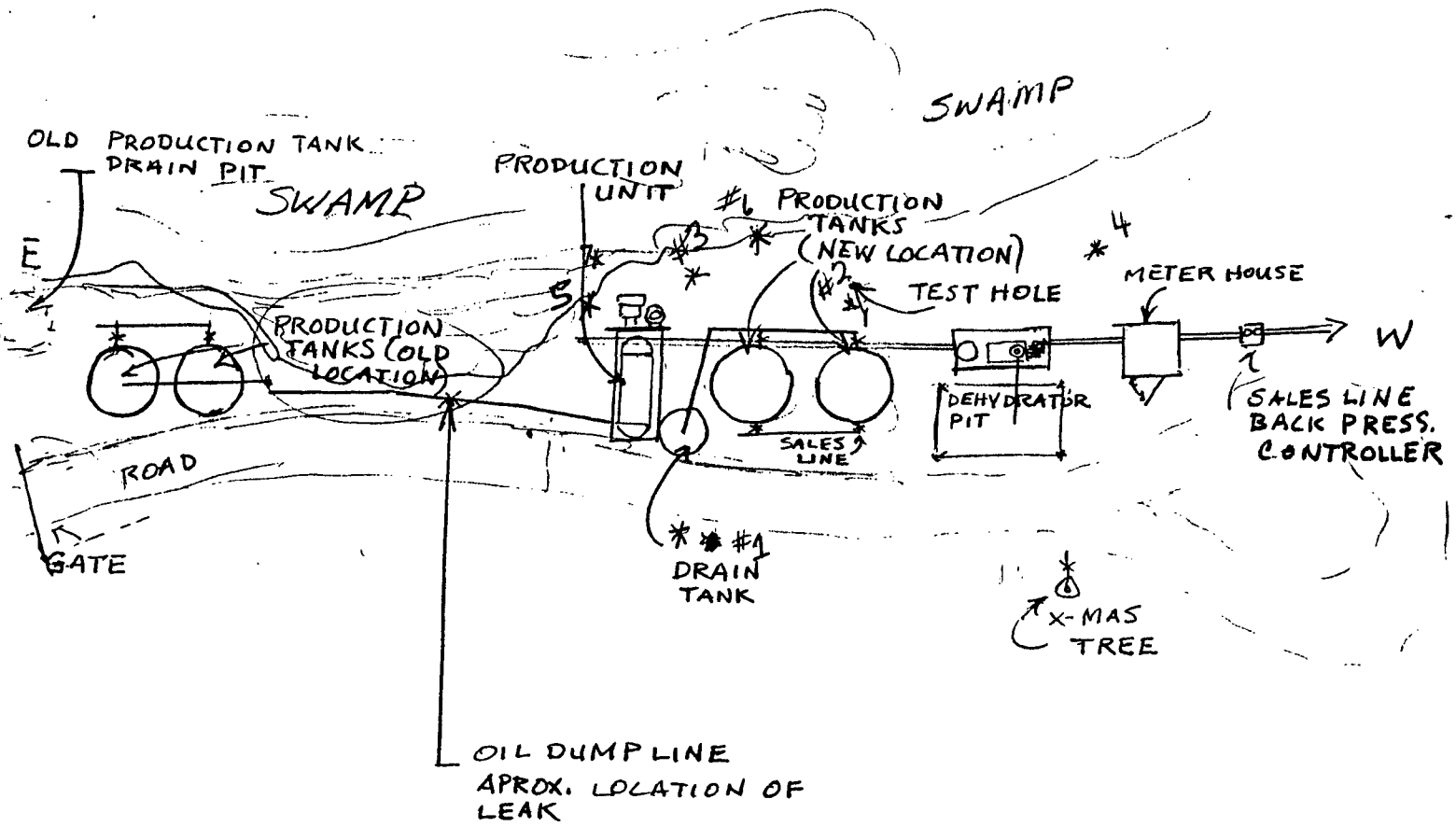
Concerning the "oil spill" at the Valdez A-1 this is what I remember. Unfortunantly there is little or no documentation. To better understand what happened I drew a small map. I was given this well aprox. 2 years ago to operate. About 2 weeks went by when I found a leak in the oil dump line about halfway between our production unit and production tanks 2(210 BBL). The formation of this well is a Dakota. Typically loading up, the only sanitary way to clean the well was to unload it downstream. To do this, pressure on the sales line was lowered. This was possible since the sales line flowed into a low pressure line (PICTURED CLIFFS LINE). After the well had unloaded, sales line pressure was raised to normal pressure at the back pressure controller. When I found the leak it was decided that a repair clamp would fix it. The leak was caused when the threads slipped out of a collar. A repair was made the next day.

2-11-87

Normal operation of the production unit produced some water to the production tanks. It became necessary to drain water before oil transport was acceptable. The landowner alleged that water had been drained directly into the swamp when the production tanks were in the original location.

Since it is nearly impossible to say with any accuracy how much oil was lost let me mention that normally only small amounts of oil would be lost unless the well was cleaned (after logging off) at the leak between the production unit and production tanks.

Andrew Valdez


SWAMP
OLD PRODUCTION TANK DRAIN PIT
SWAMP
PRODUCTION UNIT
#6 PRODUCTION TANKS (NEW LOCATION)
TEST HOLE
METER HOUSE
E
W
PRODUCTION TANKS (OLD LOCATION)
DEHYDRATOR PIT
SALES LINE BACK PRESS. CONTROLLER
SALES LINE
ROAD
GATE
#1 DRAIN TANK
X-MAS TREE
OIL DUMP LINE
APROX. LOCATION OF LEAK
N

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

February 11, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mr. Tony Valdez
Rt. 3, Box 100
Bloomfield, N.M. 87413

Dear Mr. Valdez:

Enclosed are the rest of the laboratory analyses of water samples taken on your property on November 17, 1986. The first laboratory results were sent to you on January 5.

We would like to meet with Tenneco representatives and perform additional sampling and investigation on your property on February 26. If this date is inconvenient for you, please let me know. Otherwise, we will all meet with you on the morning of February 26, 1987.

If you have any questions, feel free to call me in Santa Fe at 827-5884.

Sincerely,

JAMI BAILEY
Field Representative

JB:dp

Enc.

cc: Martin W. Buys, Tenneco
OCD-Aztec

86- 1345-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT STATE OF NEW MEXICO

754-ugw

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1345 AFB
DATE REC. 11-20-86
PRIORITY

PHONE(S): 827-5812 USER CODE: 82235
SUBMITTER: David Boyer CODE: 260

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 861117131010 <13

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:_____ CODE:

COUNTY: SAN JUAN ; CITY: BLOOMFIELD CODE:

LOCATION CODE: (Township-Range-Section-Tracts) 29N+11W+2434 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: TONY VALDEZ Rt.3 Box 100 BLOOMFIELD 87413
TENNECO VALDEZ A #1 (Basin Dakota Gas Well)

FIELD DATA:

pH=_____; Conductivity= 370 umho/cm at 14.5 °C; Chlorine Residual=_____ mg/l

Dissolved Oxygen=_____ mg/l; Alkalinity=_____ mg/l; Flow Rate_____ ____/____

Depth to water 1 1/2 ft.; Depth of well 3 1/2 ft.; Perforation Interval ____-____ ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

AUGERED HOLE 41' DOWNGRADIENT FROM PIT WITH RECENTLY INSTALLED BELOW GRADE TANK. 6" BELOW SURFACE WAS DK GRY. STAINED, HC ODOR, SOIL DTW 1 1/2' AUGERED HOLE 3 1/2' DEEP.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Boyer Method of Shipment to the Lab: Hand Carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 2/11 Phone or Letter? _____ Initials JB

ANALYSES PERFORMED

LAB. No.: OR- 1345

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
p-Xylene	400		
m-Xylene	1700		
* DETECTION LIMIT *	5ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Eight other compounds were detected by the aromatic screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 26Nov+17Dec86 Analyst's signature: M Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: L Meyerhen

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

859-wtf

DATE RECEIVED 11 | 20 | 86	LAB NO. WC 5399	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 11/7/86	SITE INFORMATION ►	Sample location TONY VALDEZ RANCH	
Collection TIME 1300		Collection site description TENNECO VALDEZ A#1	
Collected by — Person/Agency ANDERSON/BAILEY/OLSON/OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Rt 3 Box 100
Bloomfield 87413

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level 1½'	Discharge	Sample type AUGERED HOLE
pH (00400)	Conductivity (Uncorrected) 370 µmho	Water Temp. (00010) 14.5 °C	Conductivity at 25°C (00094) µmho

Field comments AUGERED HOLE 3½' DEEP, 41' SSW DOWNGRADIENT FROM DEHYDRATOR TANK DRAIN PIT. SOIL STAINED 6" BELOW SURFACE, HC ODOR

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed	F, NA		Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho		☒ Calcium (00915)	112.0	mg/l	12-1
			☒ Magnesium (00925)	9.71	mg/l	12-
			☒ Sodium (00930)	59.8	mg/l	12-4
☐ Total non-filterable residue (suspended) (00530)	mg/l		☒ Potassium (00935)	7.02	mg/l	12-4
			☒ Bicarbonate (00440)	206	mg/l	12/19
☐ Other:			☒ Chloride (00940)	< 10	mg/l	12/3
☐ Other:			☒ Sulfate (00945)	28	mg/l	11/26
☐ Other:			☒ Total filterable residue (dissolved) (70300)	448	mg/l	12/4
			☒ Other: CO_3	0		11/26

NF, A-H_2SO_4			F, A-H_2SO_4		
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l		☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N total (00610)	mg/l		☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l		☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l		☐ Other:		
☐ Total organic carbon ( )	mg/l				
☐ Other:					
☐ Other:					

Analyst	Date Reported	Reviewed by
	1 | 5 | 87	CO

Laboratory remarks pH = 7.62

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 2/11/87 Phone or ~~letter~~? Initials JB

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

HEAVY METALS GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 11 | 20 | 86	LAB NO. HM 2354	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 11 | 17 | 86	SITE INFORM-ATION ►	Sample location TONY VALDEZ RANCH	
Collection TIME 1300		Collection site description TENNECO VALDEZ A #1	
Collected by — Person/Agency ANDERSON/BAILEY/OLSON/OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Rt 3 Box 100
Bloomfield 87413

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level 11'	Discharge	Sample type AUGERED HOLE
pH (00400)	Conductivity (Uncorrected) 370 µmho	Water Temp. (00010) 14.5 °C	Conductivity at 25°C (00094) µmho

Field comments AUGERED HOLE 3½' DEEP, 4" SSW DOWNGRADIENT FROM SEPARATOR + TANK DRAIN PIT. SOIL STAINED 6" BELOW SURFACE, NO ODOR

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field with 0.45 µmembrane filter	☐ A: 2 ml H_2SO_4/L added
☐ NA: No acid added ☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☒ A: 4ml fuming HNO_3 added	

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed	F, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho		☐ Calcium (00915)	mg/l	
☐ Total non-filterable residue (suspended) (00530)	mg/l		☐ Magnesium (00925)	mg/l	
☒ Other: ICAP			☐ Sodium (00930)	mg/l	
☐ Other:			☐ Potassium (00935)	mg/l	
☐ Other:			☐ Bicarbonate (00440)	mg/l	
			☐ Chloride (00940)	mg/l	
			☐ Sulfate (00945)	mg/l	
			☐ Total filterable residue (dissolved) (70300)	mg/l	
			☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed	F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l		☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N total (00610)	mg/l		☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l		☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l		☐ Other:		
☐ Total organic carbon ( )	mg/l				
☐ Other:					
☐ Other:					

Analyst | Date Reported 12 \| 10 \| 86 | Reviewed by Jim Ashley

Laboratory remarks Seal in tact - broken by JB 11/21/86 Digested

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 4/3/87 Phone or (letter?) Initials JB

ICAP SCAN

SLD Lab No. HM 2354 Reviewed by: Jim Ashley

Analyst JB Date Reported: 12/10/86

Date Analyzed 12/10/86

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	<0.1	
Barium	0.7	
Beryllium	<0.1	
Boron	0.1	
Cadmium	<0.1	
Calcium	110.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.1	
Lead	<0.1	
Magnesium	12.	
Manganese	3.4	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	5.7	
Silver	<0.1	
Strontium	2.1	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		
Selenium		
Mercury		