WATER CONTAMINATION STUDY

AMERADA HESS CORPORATION

SAMUEL W. SMALL, PE
OFFICE 915/758-6741
FAX 915/758-6768

P.O. BOX 840
SEMINOLE, TEXAS 79360
915/758-6700

July 26, 2001

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7001 0360 0003 1887 2303

NOW
AP-30
11/10

Mr. William C. Olson
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87504

OIL CONSERVATION DIV.
01 JUL 30 PM 1:43

RE: **W.P. Byrd Tank Battery**
Status Report
Site Investigation
Lea County, NM

Dear Mr. Olson:

A total of eight monitor wells have been drilled and sampled as part of the referenced site investigation. Four of the wells were drilled and sampled in March of 2001 and an additional four were drilled and sampled in June of 2001. Results of analyses run on samples from the first four wells indicated varying degrees of contamination in all four wells. No conclusions could be drawn as to the source or extent of the contamination. We are waiting on analytical results from the second group of wells.

When the analytical results from the second group of wells are received, a report will be submitted to the OCD documenting the analyses of the water and soil samples. If you have any questions, please contact the undersigned at 915-758-6741.

Sincerely,

Samuel Small, PE
Environmental Coordinator

Xc: Houston Environmental File
PBBU Environmental File
Monument Environmental File

AMERADA HESS CORPORATION

SAMUEL W. SMALL, PE
OFFICE 915/758-6741
FAX 915/758-6768

P.O. BOX 840
SEMINOLE, TEXAS 79360
915/758-6700

September 10, 2001

PRIORITY MAIL

Mr. William C. Olson
Oil Conservation Division
1220 St. Francis Drive
Santa Fe, New Mexico

RE: **W.P. Byrd Tank Battery**
Site Investigation
Lea County, NM

Dear Mr. Olson:

Enclosed find the Phase II Assessment reports for the referenced project. The report dated April 16, 2001 includes the preliminary record review and surface condition evaluation along with the analytical results derived from the initial four monitor wells and the existing Byrd water well. The report dated August 29, 2001 includes the analytical results derived from the drilling of four additional monitor wells.

While the reports do not conclusively delineate a source for the contamination Mr. Byrd observed in his water well, the reports do indicate that the aquifer up-gradient of the Byrd Tank Battery exhibits a significant chloride concentration. The up-gradient chloride concentration is consistent with the concentrations in the aquifer exhibited beneath the battery site and down-gradient of the battery.

The lone Byrd lease producing well up-gradient from monitor wells #4 and #5, the Byrd #4 on the attachments, has surface casing set across the fresh water interval (see attached wellbore diagram). There is no record of a casing leak having occurred in this wellbore. The only spill on record for the well location is a 5 BO and 4 BW flowline leak which occurred in 1976. Based on the information available, Amerada Hess Corporation (AHC) has concluded that this well is not a source for the chloride concentrations in the aquifer.

Any further delineation of the up-gradient chloride concentration would involve properties operated by companies other than AHC, therefore AHC has no plans for further work on this project.

If you have any questions or need additional information, please contact the undersigned at 915-758-6741.

Sincerely,

Samuel Small, PE
Environmental Coordinator

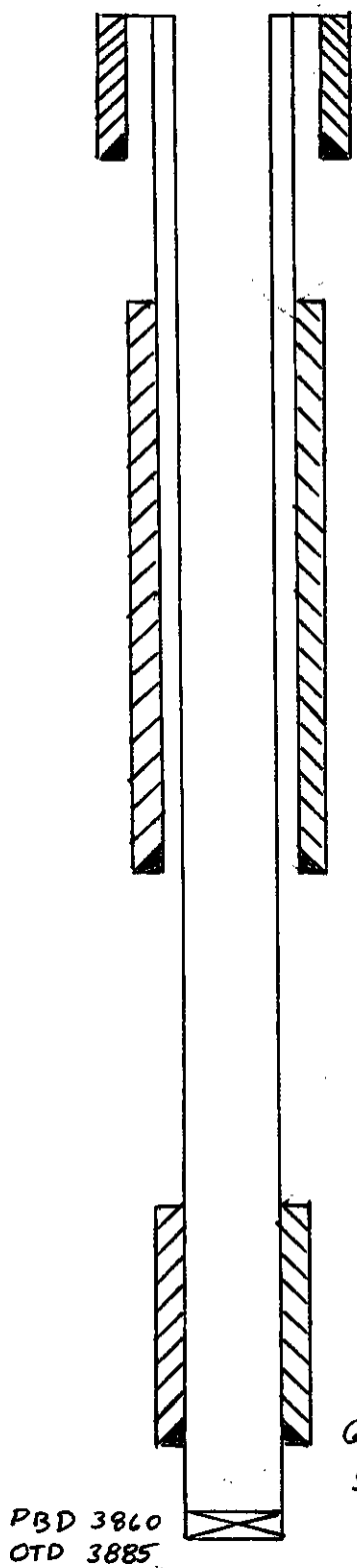
Xc: NMOCD – District 1 w/ enclosure
Houston Environmental File w/o enclosure
Houston Legal File w/o enclosure
PBBU Environmental File w/ enclosure
Monument Files w/o enclosure

AMERADA HESS CORPORATION
AHEP-1349-1

PROJECT: W.P. BYRD No. 4
C-SEC 12, T-20S, R-36E

BY: SWS
DATE: 9/10/01

/



12.5", 40# Casing
Set @ 197' w/200 sx cmt
CMT TO SURFACE (CALC)

8 5/8", 32# Casing
Set @ 2360' w/700 sx cmt
CMT TO 710' (CALC)

6 5/8", 20# Casing
Set @ 3778' w/100 sx cmt
CMT TO 3170' (CALC)

PBD 3860
OTD 3885

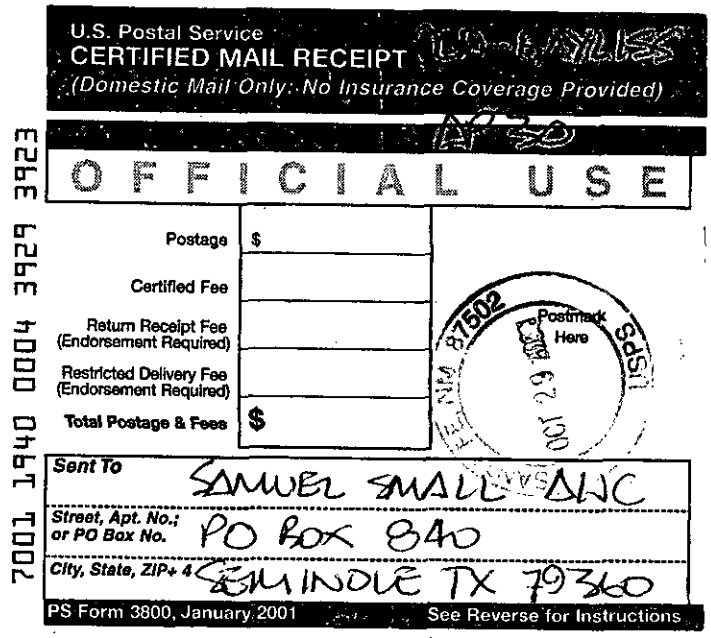
NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

October 29, 2001

CERTIFIED MAIL
RETURN RECEIPT NO. 3929-3923



Mr. Samuel Small, P.E.
Environmental Coordinator
Amerada Hess Corporation
P.O. Box 840
Seminole, Texas 79360

RE: ABATEMENT PLAN AP-30
W.P. BYRD TANK BATTERY
LEA COUNTY, NEW MEXICO

Dear Mr. Small:

The New Mexico Oil Conservation Division (OCD) has reviewed your Amerada Hess Corporation ("AHC") September 10, 2001 "W.P. BYRD TANK BATTERY, SITE INVESTIGATION, LEA COUNTY, NM" and accompanying Meridian Alliance Group LTC ("MAG") April 16, 2001 "PHASE II SITE ASSESSMENT REPORT, W.P. BYRD LEASE, SECTION 12, T-20-S, R-36-E, LEA COUNTY, NEW MEXICO" and MAG's August 29, 2001 "PHASE II SITE ASSESSMENT REPORT, W.P. BYRD LEASE, SECTION 12, T-20-S, R-36-E, LEA COUNTY, NEW MEXICO." These documents contain information on the investigation of the extent of suspected contamination that OCD reported to AHC in William Olson's May 22, 2000 "W.P. BYRD TANK BATTERY" to you requesting a workplan for this investigation.

Results of AHC's work show the ground water underlying your pits contains commingled contaminants that include 2.74 feet of free product and benzene in excess of the New Mexico Water Quality Control Commission (WQCC) standards. Pursuant to 19 NMAC 15.A.19.C.1, the OCD requires an abatement plan for the Byrd Site to abate ground water pollution. To initiate the abatement plan process, the OCD requires AHC submit before December 31, 2001 an abatement plan proposal to the OCD Director for approval pursuant to OCD Rule 19.E.1. and OCD Rule 19.E.3.

Results of AHC's work to date can be applied to meet in part the requirements of a Stage 1 plan. However, more investigation work needs to be done. As part of future work for the Stage 1 site investigation, OCD requires the following information.

1. A description of the site history that includes the nature(s) of the release(s) that caused the water pollution. The nature of the release(s) should include such information as
   a) type of release(s);
   b) source of release(s);
   c) volume of release(s);
   d) date of releases(s);
   e) whether notification of release(s) was made; and
   f) the party responsible for release(s).

2. The vertical and horizontal extent and magnitude of contamination, especially to the southeast, east, and northeast of the monitoring sites shown on the MAG reports.

3. An inventory of water wells within one (1) mile of the contamination zone and the location and number of wells actually and potentially affected by the pollution.

4. A monitoring program, including sampling stations and frequencies, for the duration of the abatement plan. Testing shall include BTEX as done by MAG, but expanded to include
   a) polycyclic aromatic hydrocarbons (PAH);
   b) New Mexico Water Quality Control Commission (WQCC) metals relevant to the types of releases; and
   c) major cations and anions.

5. A quality assurance plan, consistent with sampling and analytical techniques listed in 20 NMAC 6.3107. and with Section 1103 of 20 NMAC 6.1.

6. A schedule of Stage 1 abatement plan activities, including the submission of progress and final site investigation reports.

7. Reviewing your MAG reports, the MAG monitoring wells appear to have been properly installed and sampled, but no information was provided about their development. Please describe their well development procedures.

Rule 19 abatement procedures allow a person to abate water pollution while an abatement plan approval is pending. MAG reports show several feet of free product in their MW#3. AHC may want to consider recovery of free product while abatement plans approvals are underway. Generally, prompt recovery of free product will lessen overall remediation time and expense.

OCD encourages electronic submission of abatement plans and related documents. If you have any questions, please contact Randolph Bayliss at (505) 476-3493

Sincerely,

Roger C. Anderson, Chief
Environmental Bureau

ROA/rb

xc: Chris Williams, OCD Hobbs District Office

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SAMUEL SMALL
NUEVADA WESS CORP
PO BOX 840
SEMINOLE TX 79360

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X S.W. Small ☐ Agent ☐ Addressee

B. Received by (Printed Name) S.W. Small
C. Date of Delivery 11/5/01

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 3929 3923

PS Form 3811, August 2001 Domestic Return Receipt AP 30 102595-01-M-2509

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

May 22, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5051-3136

Mr. Samuel Small
Amerada Hess Corporation
P.O. Box 840
Seminole, Texas 79360

RE: W.P. BYRD TANK BATTERY

Dear Mr. Small:

On March 21, 2000 the New Mexico Oil Conservation Division (OCD) sampled a water well at the J.R. Byrd residence in Monument, New Mexico in response to Mr. Byrd's complaint that his ground water is contaminated. The results of these samples (enclosed) show that the water is contaminated with benzene, total dissolved solids (TDS) and chlorides in excess of the New Mexico Water Quality Control Commission (WQCC) ground water standards. A further inspection of the area showed that Amerada Hess Corporation (AHC) has a tank battery directly upgradient of the well called the W.P. Byrd Lease and located in Unit G, Section 12, Township 20 South, Range 36 East, Lea County, New Mexico. During the inspection the OCD observed evidence of past spills at the tank battery. In addition, Mr. Byrd stated that there were formerly 2 unlined pits located at the tank battery.

In light of this information, the OCD requires that AHC submit a work plan to the OCD to investigate the extent of contamination related to AHC's W.P. Byrd Lease Tank Battery. Please submit the work plan to the OCD Santa Fe Office by June 30, 2000 with a copy provided to the OCD Hobbs District Office. If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

enclosure

xc: Chris Williams, OCD Hobbs District Office.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

May 3, 2000

Mr. J.R. Byrd
P.O. Box 32
Monument, New Mexico 88265

RE: WATER WELL SAMPLE ANALYSES
BYRD RANCH

Dear Mr. Byrd:

Enclosed you will find a copy of the laboratory analytical results of the water sample from the Raymond Byrd well and Red Byrd #1 well in Monument, New Mexico that the New Mexico Oil Conservation Division (OCD) obtained on March 21, 2000. The Raymond Byrd well contains dissolved petroleum related constituents and fluoride in excess of New Mexico Water Quality Control Commission (WQCC) ground water standards. The Red Byrd #1 well contains dissolved petroleum related constituents, chloride, fluoride and total dissolved solids in excess of WQCC ground water standards. The OCD is working to determine the sources of ground water contamination in the Monument area. The OCD will copy you on all OCD correspondence related to the site.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

Enclosure

xc w/ enclosure: Chris Williams, OCD Hobbs District Supervisor

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Bill Olson
OCD
2040 S. Pacheco
Santa Fe, NM 87505

Report Date: 4/11/00

Project Number: N/A
Project Name: N/A
Project Location: Red Byrd Ranch

Order ID Number: A00032308

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
143094	0003211115(Raymond Byrd)	Water	3/21/00	11:15	3/23/00
143095	0003211415(Red Byrd #1)	Water	3/21/00	14:15	3/23/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Cation-Anion Balance Sheet

DATE: 4/11/00 MK

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
143094	121	25	70	2.8	404	10	100	0	1.6	650	1000
143095	3363	1454	6129	115	78	410	19000	0	3.1	42000	54000

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	**Total Cations in meq/L**	**Total Anions in meq/L**	**Percentage Error**
143094	6.04	2.06	3.05	0.07	8.08	0.21	2.82	0	0.084224	11.21	11.19	0.163801275
143095	167.81	119.65	266.61	2.94	1.56	8.54	535.99	0	0.163184	557.02	546.25	1.951873174

	EC/Cation	EC/Anion				
143094	1121.1774	1119.3424	range	900	to	1100
143095	55701.656	54624.9384	range	48600	to	59400

TDS/EC	TDS/Cat	TDS/Anion	
0.65	0.58	0.58	needs to be 0.55-0.77
0.78	0.75	0.77	needs to be 0.55-0.77

Analytical Results Report

Sample Number: 143094
Description: 0003211115(Raymond Byrd)

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
8260 (µg/L)									
Bromochloromethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dichlorodifluoromethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chloromethane (methyl chloride)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Vinyl Chloride	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromomethane (methyl bromide)	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
Chloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Trichlorofluoromethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Acetone	<50.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
Iodomethane (methyl iodide)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Carbon Disulfide	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Acrylonitrile	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Butanone (MEK)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
4-methyl-2-pentanone (MIBK)	<50.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
2-hexanone	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans 1,4-Dichloro-2-butene	<50.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
1,1-Dichloroethene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Methylene chloride	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
MTBE	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans-1,2-Dichloroethene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1-Dichloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
cis-1,2-dichloroethene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2,2-Dichloropropane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichloroethane (EDC)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chloroform	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,1-Trichloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1-Dichloropropene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Benzene	1023.25	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Carbon Tetrachloride	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichloropropane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Trichloroethene (TCE)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dibromomethane (methylene bromide)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromodichloromethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Chloroethyl vinyl ether	<50.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
cis-1,3-Dichloropropene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans-1,3-Dichloropropene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Toluene	46.70	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,2-Trichloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3-Dichloropropane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dibromochloromethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dibromoethane (EDB)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Tetrachloroethene (PCE)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chlorobenzene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,1,2-Tetrachloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Ethylbenzene	86.90	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
m,p-Xylene	108.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromoform	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Styrene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
o-Xylene	38.05	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2

1,1,2,2-Tetrachloroethane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Chlorotoluene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2,3-Trichloropropane	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Isopropylbenzene	65.65	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromobenzene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
n-Propylbenzene	29.75	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3,5-Trimethylbenzene	16.05	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
tert-Butylbenzene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2,4-Trimethylbenzene	232.25	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
sec-Butylbenzene	12.80	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3-Dichlorobenzene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
p-Isopropyltoluene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
4-Chlorotoluene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichlorobenzene (ortho)	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
n-Butylbenzene	<10.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dibromo-3-chloropropane	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
1,2,3-Trichlorobenzene	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
1,2,4-Trichlorobenzene	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
Naphthalene	27.50	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Hexachlorobutadiene	<25.00	5	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5

Surrogate (µg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
Dibromofluoromethane	53.96	1	50	108	72 - 128	JG	PB01495	QC01783	
Toluene-d8	49.23	1	50	98	91 - 107	JG	PB01495	QC01783	
4-Bromofluorobenzene	51.47	1	50	103	74 - 106	JG	PB01495	QC01783	
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Carbonate Alkalinity	<1.0	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Bicarbonate Alkalinity	404	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Total Alkalinity	404	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Conductivity (uMHOS/cm)									
Specific Conductance	1000	1	SM 2510B	3/28/00	3/28/00	JS	PB01472	QC01752	
Dissolved Metals (mg/L)									
Dissolved Calcium	121	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Magnesium	25	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Potassium	2.8	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Sodium	70	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Ion Chromatography (IC) (mg/L)									
CL	100	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.5
Fluoride	1.6	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.2
Nitrate-N	<1.0	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.2
Sulfate	10	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.5
pH (s.u.)									
pH	* 7.2	1	E 150.1	3/23/00	3/23/00	RS	PB01465	QC01744	1
* pH - Out of holding time.									
TDS (mg/L)									
Total Dissolved Solids	650	1	E 160.1	3/23/00	3/24/00	JS	PB01426	QC01693	10

Sample Number: 143095
Description: 0003211415(Red Byrd #1)

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
8260 (µg/L)									
Bromochloromethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dichlorodifluoromethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chloromethane (methyl chloride)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Vinyl Chloride	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromomethane (methyl bromide)	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
Chloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Trichlorofluoromethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Acetone	<10.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
Iodomethane (methyl iodide)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Carbon Disulfide	10.16	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Acrylonitrile	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Butanone (MEK)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
4-methyl-2-pentanone (MIBK)	<10.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
2-hexanone	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans 1,4-Dichloro-2-butene	<10.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
1,1-Dichloroethene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Methylene chloride	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
MTBE	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans-1,2-Dichloroethene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1-Dichloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
cis-1,2-dichloroethene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2,2-Dichloropropane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichloroethane (EDC)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chloroform	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,1-Trichloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1-Dichloropropene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Benzene	38.57	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Carbon Tetrachloride	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichloropropane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Trichloroethene (TCE)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dibromomethane (methylene bromide)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromodichloromethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Chloroethyl vinyl ether	<10.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	10
cis-1,3-Dichloropropene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
trans-1,3-Dichloropropene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Toluene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,2-Trichloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3-Dichloropropane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Dibromochloromethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dibromoethane (EDB)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Tetrachloroethene (PCE)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Chlorobenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,1,2-Tetrachloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Ethylbenzene	4.47	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
m,p-Xylene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromoform	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Styrene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
o-Xylene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,1,2,2-Tetrachloroethane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
2-Chlorotoluene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2,3-Trichloropropane	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2

Isopropylbenzene	2.05	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Bromobenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
n-Propylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3,5-Trimethylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
tert-Butylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2,4-Trimethylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,4-Dichlorobenzene (para)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
sec-Butylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,3-Dichlorobenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
p-Isopropyltoluene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
4-Chlorotoluene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dichlorobenzene (ortho)	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
n-Butylbenzene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
1,2-Dibromo-3-chloropropane	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
1,2,3-Trichlorobenzene	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
1,2,4-Trichlorobenzene	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5
Naphthalene	<2.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	2
Hexachlorobutadiene	<5.00	1	S 8260B	3/29/00	3/29/00	JG	PB01495	QC01783	5

Surrogate (µg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
Dibromofluoromethane	53.29	1	50	107	72 - 128	JG	PB01495	QC01783	
Toluene-d8	49.66	1	50	99	91 - 107	JG	PB01495	QC01783	
4-Bromofluorobenzene	49.60	1	50	99	74 - 106	JG	PB01495	QC01783	
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Carbonate Alkalinity	<1.0	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Bicarbonate Alkalinity	78	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Total Alkalinity	78	1	E 310.1	3/30/00	3/30/00	JS	PB01502	QC01789	1
Conductivity (uMHOS/cm)									
Specific Conductance	54000	1	SM 2510B	3/28/00	3/28/00	JS	PB01472	QC01752	
Dissolved Metals (mg/L)									
Dissolved Calcium	3363	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Magnesium	1454	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Potassium	115	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Dissolved Sodium	6129	1	E 200.7	3/24/00	4/7/00	RR	PB01441	QC01712	0.5
Ion Chromatography (IC) (mg/L)									
CL	19,000	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.5
Fluoride	3.1	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.2
Nitrate-N	<1.0	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.2
Sulfate	410	1	E 300.0	3/23/00	3/23/00	JS	PB01428	QC01692	0.5
pH (s.u.)									
pH	* 6.7	1	E 150.1	3/23/00	3/23/00	RS	PB01465	QC01744	1
* pH - Out of holding time.									
TDS (mg/L)									
Total Dissolved Solids	42,000	1	E 160.1	3/23/00	3/24/00	JS	PB01426	QC01693	10

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Bromochloromethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Dichlorodifluoromethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Chloromethane (methyl chloride) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Vinyl Chloride (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Bromomethane (methyl bromide) (µg/L)		<5.00	5	3/29/00	PB01495	QC01783
Chloroethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Trichlorofluoromethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Acetone (µg/L)		<10.00	10	3/29/00	PB01495	QC01783
Iodomethane (methyl iodide) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Carbon Disulfide (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Acrylonitrile (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
2-Butanone (MEK) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
4-methyl-2-pentanone (MIBK) (µg/L)		<10.00	10	3/29/00	PB01495	QC01783
2-hexanone (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
trans 1,4-Dichloro-2-butene (µg/L)		<10.00	10	3/29/00	PB01495	QC01783
1,1-Dichloroethene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Methylene chloride (µg/L)		<5.00	5	3/29/00	PB01495	QC01783
MTBE (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
trans-1,2-Dichloroethene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,1-Dichloroethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
cis-1,2-dichloroethene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
2,2-Dichloropropane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,2-Dichloroethane (EDC) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Chloroform (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,1,1-Trichloroethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,1-Dichloropropene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Benzene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Carbon Tetrachloride (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,2-Dichloropropane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Trichloroethene (TCE) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Dibromomethane (methylene bromide) (µg		<2.00	2	3/29/00	PB01495	QC01783
Bromodichloromethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
2-Chloroethyl vinyl ether (µg/L)		<10.00	10	3/29/00	PB01495	QC01783
cis-1,3-Dichloropropene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
trans-1,3-Dichloropropene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Toluene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,1,2-Trichloroethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,3-Dichloropropane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Dibromochloromethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,2-Dibromoethane (EDB) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Tetrachloroethene (PCE) (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Chlorobenzene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
1,1,1,2-Tetrachloroethane (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
Ethylbenzene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783
m,p-Xylene (µg/L)		<2.00	2	3/29/00	PB01495	QC01783

Bromoform (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
Styrene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
o-Xylene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,1,2,2-Tetrachloroethane (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
2-Chlorotoluene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,2,3-Trichloropropane (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
Isopropylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
Bromobenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
n-Propylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,3,5-Trimethylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
tert-Butylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,2,4-Trimethylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,4-Dichlorobenzene (para) (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
sec-Butylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,3-Dichlorobenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
p-Isopropyltoluene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
4-Chlorotoluene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,2-Dichlorobenzene (ortho) (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
n-Butylbenzene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
1,2-Dibromo-3-chloropropane (µg/L)	<5.00	5	3/29/00	PB01495	QC01783
1,2,3-Trichlorobenzene (µg/L)	<5.00	5	3/29/00	PB01495	QC01783
1,2,4-Trichlorobenzene (µg/L)	<5.00	5	3/29/00	PB01495	QC01783
Naphthalene (µg/L)	<2.00	2	3/29/00	PB01495	QC01783
Hexachlorobutadiene (µg/L)	<5.00	5	3/29/00	PB01495	QC01783

Surrogate	Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
Dibromofluoromethane (µg/L)	49.09	50	98	72 - 128	QC01783
Toluene-d8 (µg/L)	49.60	50	99	91 - 107	QC01783
4-Bromofluorobenzene (µg/L)	50.68	50	101	74 - 106	QC01783

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	3/30/00	PB01502	QC01789
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	3/30/00	PB01502	QC01789
Bicarbonate Alkalinity (mg/L as CaCo3)		<4.0	1	3/30/00	PB01502	QC01789
Total Alkalinity (mg/L as CaCo3)		<4.0	1	3/30/00	PB01502	QC01789

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Specific Conductance (uMHOS/cm)		7.4		3/28/00	PB01472	QC01752

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Dissolved Calcium (mg/L)		<.50	0.5	4/7/00	PB01441	QC01712
Dissolved Magnesium (mg/L)		<.50	0.5	4/7/00	PB01441	QC01712
Dissolved Potassium (mg/L)		<.50	0.5	4/7/00	PB01441	QC01712
Dissolved Sodium (mg/L)		<.50	0.5	4/7/00	PB01441	QC01712

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	3/23/00	PB01428	QC01692
Fluoride (mg/L)		<0.2	0.2	3/23/00	PB01428	QC01692
Nitrate-N (mg/L)		<0.2	0.2	3/23/00	PB01428	QC01692
Sulfate (mg/L)		<0.5	0.5	3/23/00	PB01428	QC01692

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		<10	10	3/24/00	PB01426	QC01693

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	710	1	625	1296.69	94		80 - 120	-	QC01692
MS	Fluoride (mg/L)	1.7	1	125	127.36	101		80 - 120	-	QC01692
MS	Nitrate-N (mg/L)	6.4	1	250	252.69	99		80 - 120	-	QC01692
MS	Sulfate (mg/L)	1300	1	625	1944.29	103		80 - 120	-	QC01692
MSD	CL (mg/L)	710	1	625	1296.55	94	0	-	0 - 20	QC01692
MSD	Fluoride (mg/L)	1.7	1	125	128.99	102	1	-	0 - 20	QC01692
MSD	Nitrate-N (mg/L)	6.4	1	250	253.51	99	0	-	0 - 20	QC01692
MSD	Sulfate (mg/L)	1300	1	625	1955.56	105	2	-	0 - 20	QC01692

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Dissolved Calcium (mg/L)	89	1	1000	1178	109		75 - 125	-	QC01712
MS	Dissolved Magnesium (mg/L)	22	1	1000	1062	104		75 - 125	-	QC01712
MS	Dissolved Potassium (mg/L)	1.4	1	1000	947	95		75 - 125	-	QC01712
MS	Dissolved Sodium (mg/L)	25	1	1000	1003	98		75 - 125	-	QC01712
MSD	Dissolved Calcium (mg/L)	89	1	1000	1161	107	2	-	0 - 20	QC01712
MSD	Dissolved Magnesium (mg/L)	22	1	1000	1050	103	1	-	0 - 20	QC01712
MSD	Dissolved Potassium (mg/L)	1.4	1	1000	978	98	3	-	0 - 20	QC01712
MSD	Dissolved Sodium (mg/L)	25	1	1000	1001	98	0	-	0 - 20	QC01712

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	1,1-Dichloroethene (ug/L)		1	100	120	120		79 - 129	-	QC01783
MS	1,1-Dichloroethene (ug/L)		1	100	120	120		80 - 120	-	QC01783
MS	Benzene (ug/L)	<2.00	1	100	106	106		77 - 130	-	QC01783
MS	Trichloroethene (TCE) (ug/L)		1	100	107	107		83 - 108	-	QC01783
MS	Toluene (ug/L)	4.09	1	100	108	108		85 - 114	-	QC01783
MS	Chlorobenzene (ug/L)		1	100	104	104		87 - 114	-	QC01783

Standard	Surrogate	Result	Dil.	Spike Amount	Analyst	% Rec.	% Rec. Limit	Prep Batch #	QC Batch #
MS	Dibromofluoromethane (µg/L)	48.64	1	50	JG	97	72 - 128	PB01495	QC01783
MS	Toluene-d8 (µg/L)	48.92	1	50	JG	98	91 - 107	PB01495	QC01783
MS	4-Bromofluorobenzene (µg/L)	49.91	1	50	JG	100	74 - 106	PB01495	QC01783

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MSD	1,1-Dichloroethene (ug/L)		1	100	124	124	3	-	0 - 20	QC01783
MSD	1,1-Dichloroethene (ug/L)		1	100	124	124	3	-	0 - 20	QC01783
MSD	Benzene (ug/L)	<2.00	1	100	108	108	2	-	0 - 20	QC01783
MSD	Trichloroethene (TCE) (ug/L)		1	100	109	109	2	-	0 - 20	QC01783
MSD	Toluene (ug/L)	4.09	1	100	110	110	2	-	0 - 20	QC01783

MSD	Chlorobenzene (ug/L)		1	100	105	105	1	-	0 - 20	QC01783

Standard	Surrogate	Result	Dil.	Spike Amount	Analyst	% Rec.	% Rec. Limit	Prep Batch #	QC Batch #
MSD	Dibromofluoromethane (µg/L)	50.38	1	50	JG	101	72 - 128	PB01495	QC01783
MSD	Toluene-d8 (µg/L)	49.27	1	50	JG	99	91 - 107	PB01495	QC01783
MSD	4-Bromofluorobenzene (µg/L)	49.52	1	50	JG	99	74 - 106	PB01495	QC01783

Quality Control Report
Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01789
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01789
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		58	54	1	7	0 - 20	QC01789
Duplicate	Total Alkalinity (mg/L as CaCo3)		58	54	1	7	0 - 20	QC01789

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Specific Conductance (uMHOS/cm)		412472	370000	1	11	0 - 20	QC01752

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		7.2	7.1	1	1	0 - 20	QC01744

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		3318	3340	1	1	0 - 20	QC01693

Quality Control Report
Lab Control Spikes and Duplicate Spike

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	1,1-Dichloroethene (ug/L)	<2.00	1	100	121	121		80 - 120	-	QC01783
LCS	Benzene (ug/L)	<2.00	1	100	105	105		77 - 130	-	QC01783
LCS	Trichloroethene (TCE) (ug/L)	<2.00	1	100	107	107		83 - 108	-	QC01783
LCS	Toluene (ug/L)	<2.00	1	100	106	106		85 - 114	-	QC01783
LCS	Chlorobenzene (ug/L)	<2.00	1	100	103	103		87 - 114	-	QC01783

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCS	Dibromofluoromethane (µg/L)	1	50	52.76	106	72 - 128	QC01783
LCS	Toluene-d8 (µg/L)	1	50	48.56	97	91 - 107	QC01783
LCS	4-Bromofluorobenzene (µg/L)	1	50	50.03	100	74 - 106	QC01783

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCSD	1,1-Dichloroethene (ug/L)	<2.00	1	100	124	124	2	-	0 - 20	QC01783
LCSD	1,1-Dichloroethene (ug/L)	<2.00	1	100	124	124	2	-	0 - 20	QC01783
LCSD	Benzene (ug/L)	<2.00	1	100	109	109	4	-	0 - 20	QC01783
LCSD	Trichloroethene (TCE) (ug/L)	<2.00	1	100	107	107	0	-	0 - 20	QC01783
LCSD	Toluene (ug/L)	<2.00	1	100	107	107	1	-	0 - 20	QC01783
LCSD	Chlorobenzene (ug/L)	<2.00	1	100	106	106	3	-	0 - 20	QC01783

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCSD	Dibromofluoromethane (µg/L)	1	50	53.79	108	72 - 128	QC01783
LCSD	Toluene-d8 (µg/L)	1	50	49.16	98	91 - 107	QC01783
LCSD	4-Bromofluorobenzene (µg/L)	1	50	49.64	99	74 - 106	QC01783

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Dissolved Calcium (mg/L)	<.50	1	100	106.9	107		75 - 125	-	QC01712
LCS	Dissolved Magnesium (mg/L)	<.50	1	100	109.3	109		75 - 125	-	QC01712
LCS	Dissolved Potassium (mg/L)	<.50	1	100	103.6	104		75 - 125	-	QC01712
LCS	Dissolved Sodium (mg/L)	<.50	1	100	99.8	100		75 - 125	-	QC01712
LCSD	Dissolved Calcium (mg/L)	<.50	1	100	106.4	106	0	-	0 - 20	QC01712
LCSD	Dissolved Magnesium (mg/L)	<.50	1	100	109.1	109	0	-	0 - 20	QC01712
LCSD	Dissolved Potassium (mg/L)	<.50	1	100	103.6	104	0	-	0 - 20	QC01712
LCSD	Dissolved Sodium (mg/L)	<.50	1	100	99.1	99	1	-	0 - 20	QC01712

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Vinyl Chloride (µg/L)		100	115	115	80 - 120	3/29/00	QC01783
CCV 1	1,1-Dichloroethene (µg/L)		100	111	111	80 - 120	3/29/00	QC01783
CCV 1	Chloroform (µg/L)		100	107	107	80 - 120	3/29/00	QC01783
CCV 1	1,2-Dichloropropane (µg/L)		100	103	103	80 - 120	3/29/00	QC01783
CCV 1	Toluene (µg/L)		100	103	103	80 - 120	3/29/00	QC01783
CCV 1	Chlorobenzene (µg/L)		100	106	106	80 - 120	3/29/00	QC01783
CCV 1	Ethylbenzene (µg/L)		100	105	105	80 - 120	3/29/00	QC01783
CCV 1	Dibromofluoromethane (µg/L)		50	50.59	101	80 - 120	3/29/00	QC01783
CCV 1	Toluene-d8 (µg/L)		50	49.94	100	80 - 120	3/29/00	QC01783
CCV 1	4-Bromofluorobenzene (µg/L)		50	51.99	104	80 - 120	3/29/00	QC01783

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	3/30/00	QC01789
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	192	0	80 - 120	3/30/00	QC01789
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	23	0	80 - 120	3/30/00	QC01789
ICV	Total Alkalinity (mg/L as CaCo3)		236	215	91	80 - 120	3/30/00	QC01789
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	3/30/00	QC01789
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	240	0	80 - 120	3/30/00	QC01789
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	6	0	80 - 120	3/30/00	QC01789
CCV 1	Total Alkalinity (mg/L as CaCo3)		236	246	104	80 - 120	3/30/00	QC01789

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Specific Conductance (uMHOS/cm)		1413	1330	94	80 - 120	3/28/00	QC01752
CCV 1	Specific Conductance (uMHOS/cm)		1413	1334	94	80 - 120	3/28/00	QC01752

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Dissolved Calcium (mg/L)		20	21.1	106	75 - 125	4/7/00	QC01712
ICV	Dissolved Magnesium (mg/L)		20	21.7	109	75 - 125	4/7/00	QC01712
ICV	Dissolved Potassium (mg/L)		20	20.4	102	75 - 125	4/7/00	QC01712
ICV	Dissolved Sodium (mg/L)		20	20.4	102	75 - 125	4/7/00	QC01712
CCV 1	Dissolved Calcium (mg/L)		20	21.1	106	75 - 125	4/7/00	QC01712
CCV 1	Dissolved Magnesium (mg/L)		20	21.7	109	75 - 125	4/7/00	QC01712
CCV 1	Dissolved Potassium (mg/L)		20	20.4	102	75 - 125	4/7/00	QC01712
CCV 1	Dissolved Sodium (mg/L)		20	20.4	102	75 - 125	4/7/00	QC01712

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.55	92	80 - 120	3/23/00	QC01692
ICV	Fluoride (mg/L)		2.5	2.54	102	80 - 120	3/23/00	QC01692
ICV	Nitrate-N (mg/L)		5	4.67	93	80 - 120	3/23/00	QC01692
ICV	Sulfate (mg/L)		12.5	12.13	97	80 - 120	3/23/00	QC01692
CCV 1	CL (mg/L)		12.5	11.62	93	80 - 120	3/23/00	QC01692
CCV 1	Fluoride (mg/L)		2.5	2.56	102	80 - 120	3/23/00	QC01692
CCV 1	Nitrate-N (mg/L)		5	4.70	94	80 - 120	3/23/00	QC01692
CCV 1	Sulfate (mg/L)		12.5	12.15	97	80 - 120	3/23/00	QC01692

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	3/23/00	QC01744
CCV 1	pH (s.u.)		7	7.0	100	80 - 120	3/23/00	QC01744

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	1018	102	80 - 120	3/24/00	QC01693
CCV 1	Total Dissolved Solids (mg/L)		1000	1004	100	80 - 120	3/24/00	QC01693

143094-95

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6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A000323108

Company Name: NM Oil Conservation Division
Phone #: (505) 827-7154
Address: (Street, City, Zip) 2040 S. Pacheco, Sank Fe, NM 87505
Fax #: (505) 827-8177
Contact Person: Bill Olson
Invoice to: (If different from above)
Project #:
Project Name:
Project Location: Red Byrd Ranch
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	NaHSO4	H2SO4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
143094	000321/1115 (Raymond Byrd)	2	40ml	X						X			X		3/21/00	1115
143095	000321/1415 (Red Byrd #1)	2	40ml	X						X			X		3/21/00	1415
143094	000321/1115 (Raymond Byrd)	1	1 liter	X									X		3/21/00	1115
143095	000321/1415 (Red Byrd #1)	1	1 liter	X									X		3/21/00	1415

Analysis	Requested
MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC-MS Vol. 8260B/624	2
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	1
General Chem OCD Contract # 24	
Turn Around Time if different from standard	
Hold	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Bill Olson	3/22/00	0830			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Hensley	3-23-00	9:00 AM

LAB USE ONLY
Intact (Y) / N
Headspace Y / (N)
Temp -1° °
Log-in Review MB 4/11

REMARKS:

Carrier # FedEx 8157-3603-1850

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

3/21/00 Raymond Byrd Well

arrival at 1000 hrs with Penny Williams
Met with Red Byrd
EOTT pipeline spill site, nearby
Red pulled pump, oil on pump
Well house along dirt entrance road across from Raymond Byrd Residence, approx ½ mile north of Jimmy Cooper Ranch Monument, NM
Amerada Hess oil well 50-60' west of well house North Monument Grayburg San Andres Unit
BLK 16 Well #21
sec 32 T 19S R37E
NMOCD # 293

Sampled well
Purged 65 gallons, water grey HC odor + sheen
sample id = 000321115

samples - 8260
cations/anions

03-21-00 DW

↑N

Monument →

Sample
I.D. 000321115
Project Name: Raymond Byrd Well
Location: Raymond Byrd Well

Raymond Byrd Residence

Well house

Amerada Hess pump jack

(Water - 17.75
TD - 32.4
14.65' water in well)

Jimmy Cooper Ranch

Bill Olson field notes

Red Boyd 03-21-00

arrived at Red Boyd's house @ 11:50 a.m.

Red Boyd Well #1

claims water well contaminated (Climax Chemical)?

* (Sheen on water)

Purging

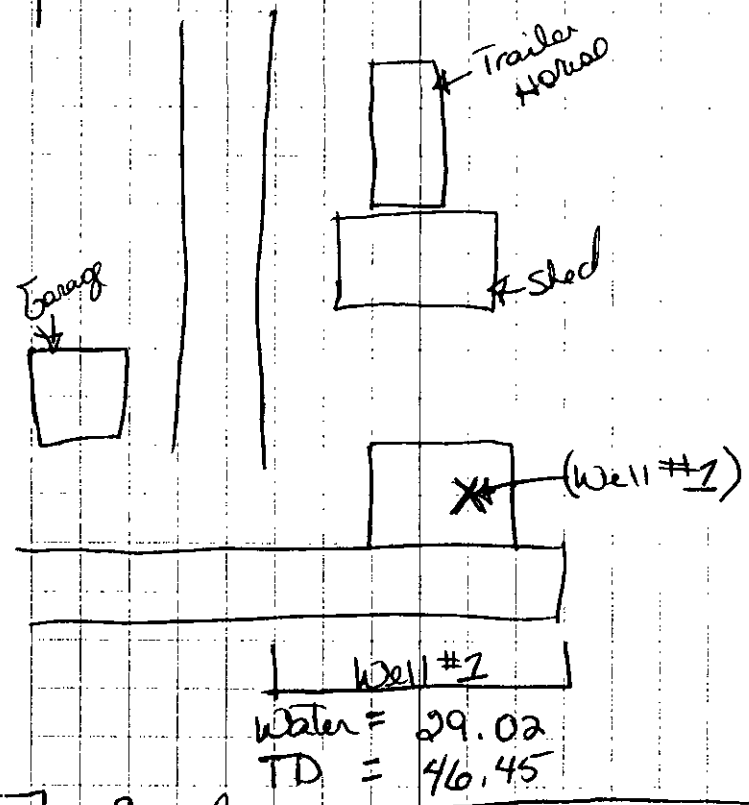
Conductivity	Temp	Volume
26,000	19°	10 gallons
26,500	18.5°	20 gallons
26,250	18.5°	30 gallons
29,000	(not working)	40 gallons
30,000	"	50 gallons
30,500	"	60 gallons

conductivity probe not working properly

water grey, sheen oil, fizzes in bucket
H_2S odor
Sample water well, purged 60 gallons
sample id = 000324 1415

E

03-21-00 DW

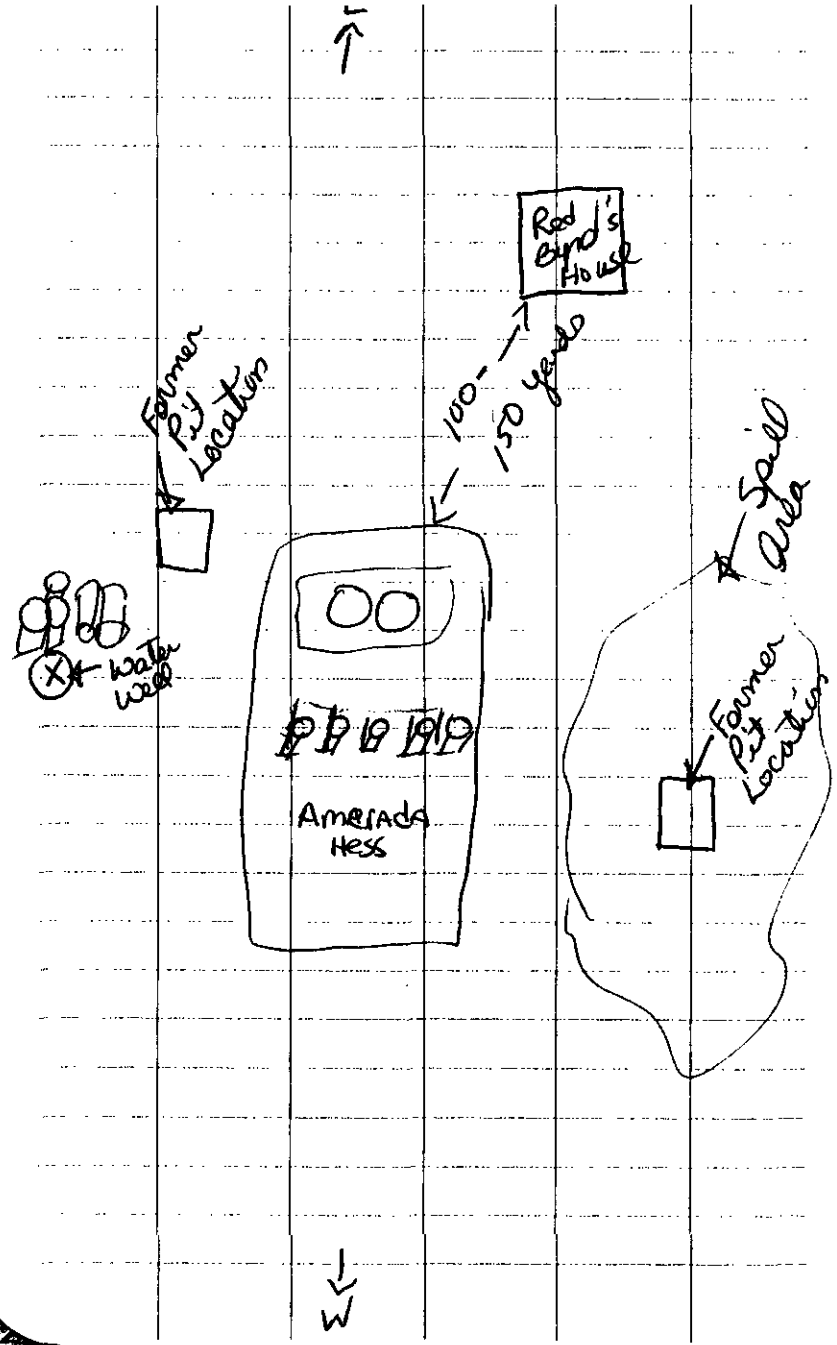


Sample

ID #:

Project Name: Red Boyd #1 Well

Location: Red Boyd #1 Well



Amerada Hess
Ut G - Sec 12 - T20S - R36E
W.P. Byrd Lease

Mr. J.R. Byrd
P.O. Box 32
Monument, NM 88265
(505) 397-6283