1R - 146

GENERAL CORRESPONDENCE

YEAR(S):

1994 → 1992

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

September 27, 1994

Mr. William C. Olson
Hydrogeologist - Environmental Bureau
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

RE: Monitor Well Plugging and Abandonment-Former Exxon Facility
2607/2609 West Marland Boulevard
Hobbs, New Mexico

Dear Mr. Olson:

This letter report is to inform you that the monitor well located at the above referenced facility has been plugged and abandoned. The abandonment activities were carried out according to the OCD approved workplan generated by ENSR Consulting and Engineering. The field activities were performed by ENSR and their subcontractor, Harrison Drilling and Environmental Services on Monday, August 29, 1994.

The abandonment activities included the removal of the flush mount well protector, plugging the screen with bentonite, and grouting the remaining casing.

The flush mount well protector was pulled from the ground with a backhoe, exposing the PVC well pipe, encased with grout, approximately 6-inches below ground surface. Bentonite pellets were then placed inside the well casing to plug the well screen. The bentonite plug extended to 1-foot above the screen. The purpose of the plug was to deter the cement slurry from entering the aquifer. The remaining casing was then grouted with a cement/bentonite slurry which was tremmied from the bottom up to ground surface.

Wayne Price from the OCD district office in Hobbs was on-site during the abandonment activities.

As a result of the activities described above, Exxon Chemical Company would like to request final closure of this property.

1009L005.02

If you have any questions or comments regarding the activities described above, please call me or Jay Swindle of ENSR at (713) 520-9900.

Sincerely,

Paul Reed/wpp

Paul Reed
Environmental Projects Coordinator
(713) 425-1237

PR:se

cc: Wayne Price, OCD Hobbs District Office
Trish Carls, Brown McCarroll and Oaks Hartline
Jay Swindle, ENSR Consulting and Engineering
Master File

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☐ Telephone ☒ Personal	Time 11:25AM	Date 8/29/94
Originating Party		**Other Parties**
SHAWN EUBANKS - EN SA		JERRY SEXTON -
		WAYNE PRICE

Subject EXXON - W MARLAND SITE

Discussion WITNESSED MW CLOSURE
FILLED 2" PVC WITH CEMENT GROUT + 2% BENTONITE PELLET
REMOVED MW SURFACE PAD - FOUND OUTSIDE PIPE
CEMENT! WILL CUT PIPE BELOW SURFACE!
& COVER.

Conclusions or Agreements

Distribution CC: BOLSIN

Signed

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

July 18, 1994

Mr. William C. Olson
Hydrogeologist - Environmental Bureau
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

Re: Monitor Well Abandonment at Former Exxon Facility
2607/2609 West Marland Boulevard, Hobbs, New Mexico

Dear Mr. Olson:

This letter provides the scope of work for the well abandonment activities to be performed at the former Exxon Chemical Facility located at 2607/2609 West Marland Boulevard, in Hobbs, New Mexico.

The proposed activities presented below are in response to your letter dated June 16,1994 which states that the New Mexico Oil Conservation Division (OCD) cannot formally issue final closure of the sites' remedial actions until the groundwater monitoring well (WM-1), installed as part of the groundwater assessment portion of the remedial studies, has been properly plugged and abandoned.

Based on the OCD's comments, Exxon proposes the following activities, in order, for plugging and abandoning the monitor well:

- Remove the flush mount well protector.
- Grout well from the bottom to ground surface.
- Dispose of all waste material associated with WM-1.

Before grouting the well, the flush mount well protector will be removed from the ground. The concrete surrounding the flush mount will be broken up using either a sledge hammer or other means of loosening the flush mount before it can be removed.

The well will then be grouted in place. Grouting will occur by pumping a bentonite/cement slurry into the well. The slurry will contain 5 to 10% bentonite mixed with Type 1 Portland cement and will be tremmied from the bottom of the well up to ground surface. The boring log, showing well construction details for WM-1, is attached for your reference.

After completion of the well plugging activities, all soil cuttings and wastewater produced from the monitor well installation and abandonment will be disposed of. Due to the fact that no evidence of groundwater contamination has been found in this well (WM-1), all waste material associated with WM-1 will be disposed of at the back of the property along the southern boundary.

The New Mexico OCD will be notified at least 7 days prior to initiation of the above mentioned activities.

If you have any questions or comments regarding the work outlined in this letter, please call me at (713) 425-1237 or Jay Swindle of ENSR at (713) 520-9900.

Very truly yours,

Shawn Eubanks for

Paul Reed
Environmental Projects Coordinator

cc: Wayne Price, OCD Hobbs District Office
Trish Carls, Brown McCarroll and Oaks Hartline
Jay Swindle, ENSR Consulting and Engineering
Master File

Attachments

ENSR Consulting & Engineering

SUBSURFACE EXPLORATION LOG

BORING NUMBER: WM-1

CLIENT: BROWN McCARROLL AND OAKS HARTLINE
JOB NUMBER: 1009-006-105
LOCATION: Exxon - West Harland
SURFACE ELEVATION:

GEOLOGIST: Shawn Eubanks
DATE DRILLED: 3/15/94
DRILLING COMPANY: Harrison Drilling
X - COORDINATE:

TOTAL DEPTH: 80 Feet
DRILLING METHOD: HSA
SAMPLE METHOD:
Y - COORDINATE:

DEPTH (feet)	SAMPLE NUMBER	TIME	PID (ppm)	BLOW COUNT	RECOVERY	SOIL CLASS.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	WELL DIAGRAM	DEPTH (feet)
0						FILL		FILL, fill material from excavation 0 - 6" - caliche surface 6" - 1' - silty fine sand, loose, orange	2" PVC CASING GROUT	0
5										5
10										10
15						GM		CALICHE, calcium carbonate soil, with gravel size particles mixed in a silt matrix		15
20										20
25						SP		Fine SAND (SP), loose, very light orange, dry		25
30								32' - becomes consolidated sandstone 34' - loose		30
35										35

SAMPLER TYPE
SS - SPLIT SPOON
ST - PRESSED SHELBY TUBE
RC - ROCK CORE
CC - CONTINUOUS CORE

BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER
HDC - DRIVING CASING
MD - MUD DRILLING

sulting & Engineering

CE EXPLORATION LOG

BORING NUMBER: WM-1

ARROLL AND OAKS HARTLINE
06-105
ast Mariand

GEOLOGIST: Shawn Eubanks
DATE DRILLED: 3/15/94
DRILLING COMPANY: Harrison Drilling
X - COORDINATE:

TOTAL DEPTH: 60 Feet
DRILLING METHOD: HSA
SAMPLE METHOD:
Y - COORDINATE:

DEPTH	PID (ppm)	BLOW COUNT	RECOVERY	SOIL CLASS.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	WELL DIAGRAM	DEPTH feet
						35 - consolidated		
40						40' - less consolidated	GROUT	40
45							2" PVC CASING BENTONITE PLUG	45
50				SP			SLOTTED SCREEN FILTER PACK	50
55								55
60						TERMINATED BORING AT 60'		60
65								65
70								70

SAMPLER TYPE
TUBE
RC - ROCK CORE
CC - CONTINUOUS CORE

BORING METHOD
HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGER
NDC - DRIVING CASING
MD - MUD DRILLING

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

VIA OVERNIGHT MAIL

May 24, 1994

Monitor Well Installation and Sampling Results - Former Exxon Dal Paso and West Marland Service Facilities Hobbs, New Mexico

Mr. William C. Olson
State of New Mexico
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87504

Dear Mr. Olson:

As per the Monitor Well Installation Work Plan approved by your office on January 31, 1994, please find attached the Well Installation and Sampling Reports for the above mentioned sites. Groundwater samples from the West Marland facility were collected in March and April 1994, and no contamination above the New Mexico groundwater cleanup standards was detected. However, the Dal Paso facility samples, also collected in March and April 1994, indicated a manganese concentration ranging from 0.3 ppm to 0.5 ppm which is slightly above the New Mexico standards of 0.2 ppm.

In order to ensure adequate reporting, the initial Dal Paso sampling data was sent to Roger Anderson at OCD via telefax on March 31, 1994. The wells at both facilities were sampled again on April 25, 1994. The Dal Paso results were sent to you via telefax on May 5, 1994.

To the best of Exxon's knowledge, neither Exxon nor the previous owner used or managed products containing manganese. Exxon believes that the manganese may be native to the area soils. Therefore, Exxon recommends that the background concentrations of manganese be determined to confirm that operational activities have not impacted the groundwater.

Please let me know your thoughts regarding this recommendation. Please feel free to call if you have questions regarding the reports.

Very truly yours,
Paul Reed by Shawn Gabanks
Paul Reed
Env. Projects Coordinator
(713) 425-1237

Enclosures

TELEFAX

TO: Bill Olson
Company: New Mexico OCD
FAX Number: (505) 827 5741

Date: May 5, 1994
No. of Pages: 1
Urgent: Yes

From: Paul Reed
Exxon Chemical Americas
(713) 425 1237
(713) 425 5788 FAX

Notes:

Bill,

We resampled the monitor wells at both the Marland Street and Dal Paso Street sites in Hobbs and analyzed the metals on a dissolved metals basis. The Marland Street sample was clean again. The Dal Paso Street sample showed the follo.. ng for **Manganese - 0.3 ppm.** The New Mexico standard for Manganese is 0.2 ppm. We are putting together our formal report and have it to you by June 1.

Please call me if you have questions. I look forward to discussing the Manganese issue with you after you have read the report or earlier if you wish. Thanks.

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

March 4, 1994

Monitor Well Installation and Sampling
Exxon Chemical Facilities
Dal Paso & West Marland Streets, Hobbs, NM

Mr. William C. Olson
Hydrogeologist - Environmental Bureau
New Mexico Oil Conservation Division
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 67504

Dear Mr. Olson:

The purpose of this letter is to notify the New Mexico Oil Conservation Division (OCD) of upcoming field activities at the above-referenced facilities. Scheduled activities include the installation of one monitor well at each site and subsequent groundwater sampling as described in the "Monitor Well Installation and Sampling Work Plans" submitted to the OCD in January 1994.

The work will be performed by a state-licensed drilling subcontractor under the supervision of Exxon Chemical Americas (Exxon) and ENSR Consulting and Engineering (ENSR) personnel. The work is scheduled to begin at the West Marland Street facility on Tuesday March 15, 1994. You or any of your staff are welcome to observe the field activities and to take split samples.

If you have any questions concerning this matter, please contact me at your convenience.

Sincerely,

Alice E McHugh for

J. Paul Reed
Environmental Project Coordinator
Baytown Chemical Plant - W435
Safety and Environmental Department
(713) 425-1237

cc: Patricia Carls - Brown McCarroll & Oaks Hartline
Jay Swindle - ENSR Consulting and Engineering
Master File

AEM\B:hobbmw.ltr

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

January 21, 1994

Former Exxon Chemical Facilities
Dal Paso and West Marland Sites, Hobbs, NM

Mr. William C. Olson
State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87504

VIA OVERNIGHT DELIVERY

Dear Mr. Olson:

As requested in your November 18, 1993 letter, enclosed for your review and approval are two copies each of the Monitor Well Installation and Sampling Draft Work Plans for the former Exxon facilities located in Hobbs, New Mexico.

If you have any questions or comments concerning this matter, please call me at any time.

Sincerely,

for Alice E McHugh

J. Paul Reed
Environmental Project Coordinator
(713) 425-1237

Enclosures

cc: Ms. Trish Carls - Brown McCarroll & Oaks Hartline
Mr. Jay Swindle - ENSR Consulting and Engineering
Master File

AEM\B:hobbs\hobbspln.ltr

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
SITE MANAGER

November 12, 1993

Mr. William Olson
Hydrogeologist
Environmental Bureau
Oil Conservation Division
State of New Mexico
Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Phase III Removal Action Report

Dear Mr. Olson:

Enclosed for your review and approval are draft copies of the following reports:

1. Phase III Removal Action Report; Former Exxon Chemical Company Facility, 2607/2609 West Marland Boulevard, Hobbs, New Mexico; and

2. Phase III Removal Action Report; Exxon Chemical Company Facility, 1715 Dal Paso Street, Hobbs, New Mexico.

If any further actions are necessary to address groundwater at these sites, please advise.

Very truly yours,

J. Paul Reed/mas

J. Paul Reed
Environmental Projects Coordinator
1-713-425-1237

212159.1
13232.68180

Enclosures

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

May 28, 1993

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-242-346

Mr. J.P. Reed
Env. Tech. Services Section-CN-461
Baytown Chemical Plant
Exxon Chemical
Baytown, Texas 77522

RE: REMOVAL ACTION WORKPLAN
EXXON DAL PASO AND WEST MARLAND SERVICE FACILITIES
HOBBS, NEW MEXICO

Dear Mr. Reed:

The New Mexico Oil Conservation Division (OCD) has completed a review of Exxon's February 1993 "REMOVAL ACTION WORKPLAN FOR FACILITY OWNED BY EXXON CHEMICAL COMPANY IN HOBBS, NEW MEXICO (1715 DAL PASO STREET)", Exxon's February 1993 "REMOVAL ACTION WORKPLAN FOR FACILITY FORMERLY LEASED BY EXXON CHEMICAL COMPANY IN HOBBS, NEW MEXICO (2607/2609 WEST MARLAND BOULEVARD)" and Exxon's April 28, 1993 "RESPONSE TO COMMENTS, REMOVAL ACTION WORKPLANS, FORMER EXXON DAL PASO AND WEST MARLAND SERVICE FACILITIES, HOBBS, NEW MEXICO". These documents were submitted to OCD on Exxon's behalf by Exxon's consultant ENSR Consulting and Engineering.

The above referenced remediation workplans **are hereby approved with the following condition:**

1. Exxon will provide OCD with a final report detailing the work performed within 60 days of completion of the remedial activities.

If you have any questions, please contact me at (505) 827-5885.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor
Jay Swindle, ENSR

EXXON CHEMICAL AMERICAS

EXXON CHEMICAL

Baytown Chemical Plant
Raymond C. Floyd
MANAGER

March 15, 1993

Change of Mailing Address and Phones

Mr. Roger C. Anderson
Bureau Chief, Environmental Bureau
Oil Conservation Division
Land Office Building, State of New Mexico
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Anderson:

My role at Exxon Chemical has changed recently. I am now associated with the Environmental Affairs Department at Exxon Chemical's Baytown, Texas facility. I am still working on the various site closures around the country associated with Exxon's acquisition of NL Treating Chemicals in 1987. I ask that you direct your correspondence to Exxon Chemical regarding the clean up activities at the two Hobbs, New Mexico sites to me at the following address:

J. P. Reed
Env. Tech. Services Section - CN-461
Baytown Chemical Plant
Exxon Chemical
P.O. Box 4004
Baytown, Texas 77522

Phone: (713) 425 1237
FAX: (713) 425 5788
Beeper: (713) 841 0386

Beeper Instructions:
1. Dial number and listen for 3 beeps.
2. Punch in your phone number followed by # sign.
3. Listen for 5 beeps.
4. Hang up.

Thank you for bearing with me as I make this transition to Baytown.

Very truly yours,

Paul Reed

JPR705

cc: Ms. Jo-Christy Brown - BMOH
Mr. David Sigman - ECA Legal
Mr. Jay Swindle - ENSR C&E

ENSR

ENSR Consulting
and Engineering
3000 Richmond Avenue
Houston, Texas 77098
(713) 520-9900
(713) 520-6802 (FAX)

February 4, 1993

Mr. Roger C. Anderson
Bureau Chief
Environmental Bureau
Oil Conservation Division
Land Office Building, State of New Mexico
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Waste Classification of Contaminated Soils from the former Exxon Chemical Company Facility at 2607/2609 West Marland Boulevard and Exxon Chemical Company Facility at 1715 Dal Paso, Hobbs, New Mexico

Dear Mr. Anderson:

The purpose of this letter is to:

- Notify the New Mexico Oil Conservation Division (OCD) that the requested samples have been collected and that the contaminated soils from the Exxon Chemical facilities referenced above, should be classified as non-hazardous based on the attached data,
- Submit work plans for the clean up of contaminated soils at the two sites, and
- Request authorization for disposal of the contaminated soils in the Controlled Recovery Incorporated (CRI) landfill near Hobbs, New Mexico.

Waste Classification

As discussed in our meeting on July 31, 1992 OCD requested that a waste classification of the contaminated soils at each of the two Hobbs sites be made prior to submittal of the removal action work plans to OCD. Pursuant to this request, three composite samples were collected from the areas of concern at the sites as discussed in our meeting. Each sample was composited from at least five sample points within known or suspected areas of soil contamination. Samples DP-1 (from the Dal Paso site) and MR-1 (from the Marland site) were collected from trenches through areas of known hydrocarbon and/or lead soil contamination. These contaminated areas had been identified through previous sampling conducted by ENSR in January 1992. In addition, sample DP-2 (from the Dal Paso site) was collected from a trench at the base of the collapsed septic tank as ODC requested. The soil surrounding the septic tank was suspected to have contained oily wastes prior to the tanks decommissioning in 1984. As shown by the attached analytical data, as well as past analytical data, the soils from the septic tank area at the Dal Paso site do not appear to be contaminated with metals or hydrocarbons and therefore are not addressed in the removal action work plan.

The sample results indicate that the soils at the Dal Paso and Marland Street sites are not characteristically hazardous, so the soil can be disposed of as non-hazardous waste.

The volume of contaminated soil from the two sites has been estimated to be approximately 100-200 cubic yards.

Work Plans

Work plans are attached for your review and approval. After obtaining OCD approval, ENSR expects to begin field work within 60 days, weather permitting.

Disposal Authorization Request

Exxon is requesting authorization from the OCD for disposal of the non-hazardous contaminated waste soils at the following waste management facility:

Controlled Recovery Inc., Landfill
P.O. Box 369
Hobbs, New Mexico 88241

Attached is the generator certificate and analytical data stating that the contaminated material described in this letter is not listed as a RCRA hazardous waste in 40 CFR 261.31, nor is it characteristically toxic.

We appreciate your prompt review of the attached work plans and issuance of the disposal authorization. Please return a copy of the written authorization to me at the address below.

If you have any comments or require additional information, please contact me or Scott Kuykendall at 713/520-9900.

Sincerely,

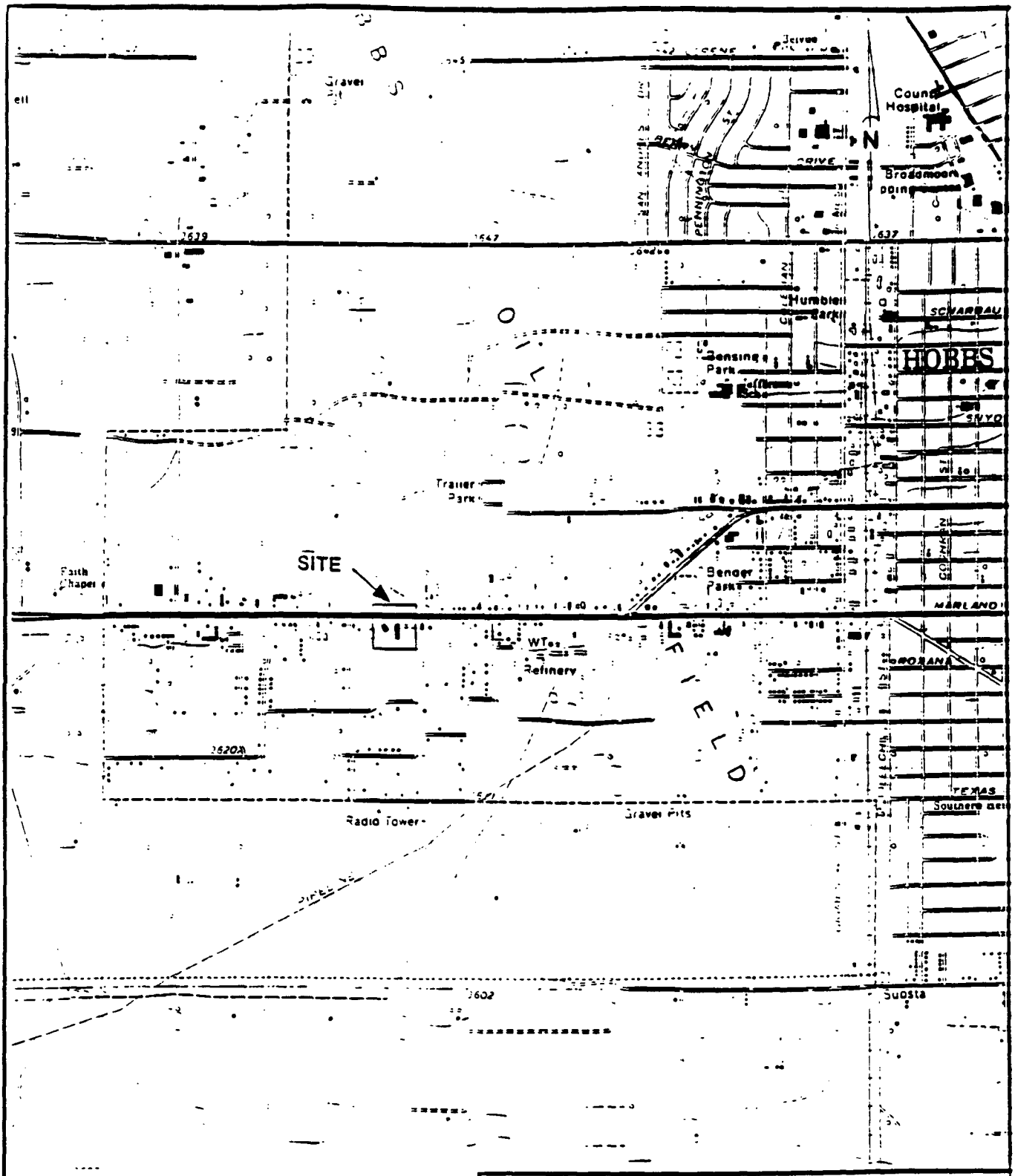
Jay Swindle, P.E.
Project Manager

J. Scott Kuykendall
Staff Geologist

JS:JSK/db

Reference No. 1009-006-120

cc: Keith Hopson, Brown McCarroll and Oaks Hartline
Paul Reed, Exxon



0 2000 4000

SCALE IN FEET

REFERENCE: U.S.G.S. Quadrangle Map for Hobbs West, New Mexico 1979

TOPO

ENSR™

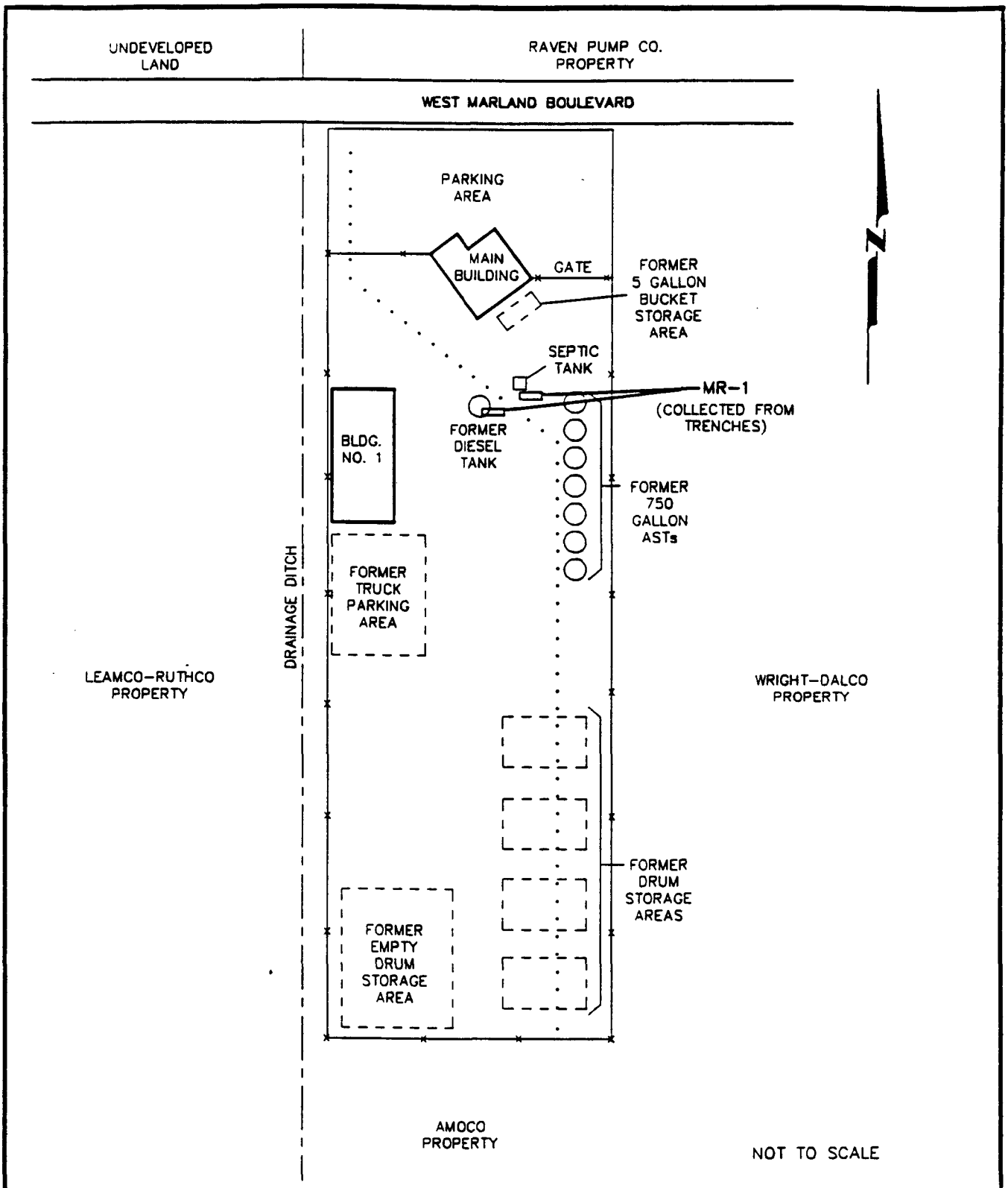
ENSR CONSULTING AND ENGINEERING

SITE LOCATION MAP

2607, 2609 WEST MARLAND BLVD.

HOBBS, NEW MEXICO

DRAWN BY: S. GHANI	DATE: 10-16-92	PROJECT NUMBER: 1009-001-150
CHK D.BY:	REVISED:	



LEGEND

- EXISTING STRUCTURE
- FENCE
- GAS PIPELINE

ENSR™
ENSR CONSULTING & ENGINEERING

SITE PLOT PLAN WITH SAMPLE LOCATIONS
2607, 2609 WEST MARLAND BLVD. HOBBS, NEW MEXICO

DRAWN: LG/SF	DATE: 11-12-92	PROJECT NUMBER:
APPV'D:	REVISED:	1009-001-150

CE100907

GENERATORS CERTIFICATE PREPARED FOR THE
STATE OF NEW MEXICO, OIL CONSERVATION DIVISION

"I certify that the waste described in this and attached documents is not a listed hazardous waste as described by 40 CFR 261 Subpart D and that the waste described is not contaminated with a listed hazardous waste. I further certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature: Paul Reed

Date Signed: 1-26-93

Name and Official Title (Type or Print):

Paul Reed
Environmental Coordinator
Econ Chemical Company
8230 Stedman
Houston, Texas 77029

Generators Name and Location:

Econ Chemical Co.
1715 Del Paso St.
Hobbs, New Mexico

Econ Chemical Co.
2607/2609 W. Marland Blvd.
Hobbs, New Mexico

Type and Quantity of Waste:

There are approximately 50 to 100 cubic yards of non-hazardous contaminated soils at the Del Paso street location and approximately 50 to 100 cubic yards at the West Marland Street location.

Summary of Analytical Results
Former Exxon Chemical Company Facility
2607/2609 West Marland Facility
Hobbs, New Mexico
Date Sampled: 9-3-92

Analytical Parameters	Regulatory Threshold Limit	Sample ID: MR-1 Depth: 0'-3'	
TCLP Metals (mg/l)		**Level Detected**	**Detection Limit**
Arsenic	5.0	<0.2	0.2
Barium	100.0	1.2	0.5
Cadmium	1.0	<0.010	0.010
Chromium	5.0	<0.05	0.05
Lead	5.0	<0.02	0.02
Mercury	0.2	<0.001	0.001
Selenium	1.0	<0.2	0.2
Silver	5.0	<0.01	0.01
TCLP Volatiles (μg/l)			
Pyridine	5,000	<11	11
Vinyl Chloride	200	<10	10
1,1-Dichloroethene	700	<5	5
Chloroform	6,000	<5	5
1,2-Dichloroethane	500	<5	5
Methyl Ethyl Ketone	200,000	<10	10
Carbon Tetrachloride	500	<5	5
Trichloroethene	500	<5	5
Benzene	500	<5	5
Tetrachloroethene	700	<5	5
Chlorobenzene	100,000	<5	5
TCLP Semivolatiles (μg/l)		**Level Detected**	**Detection Limit**
1,4-Dichlorobenzene	7,500	<11	11
2-Methylphenol	200,000	<11	11
4-Methylphenol	200,000	<11	11
3-Methylphenol	200,000	<11	11

Summary of Analytical Results
Former Exxon Chemical Company Facility
2607/2609 West Marland Facility
Hobbs, New Mexico
Date Sampled: 9-3-92

Analytical Parameters	Regulatory Threshold Limit	Sample ID: MR-1 Depth: 0'-3'	
Hexachloroethane	3,000	<11	11
Nitrobenzene	2,000	<11	11
Hexachlorobuta-diene	500	<11	11
2,4,6-Trichlorophenol	2,000	<11	11
2,4,5-Trichlorophenol	400,000	<54	54
2,4-Dinitrotoluene	130	<11	11
Hexachlorobenzene	130	<11	11
Pentachlorophenol	100,000	<54	54
RCRA Characteristics			
pH	2<pH<12.5	8.06 units	0.01 units
Corrosivity	>6.35 MMPY	Unable to analyze due to matrix	Unable to analyze due to matrix
Ignitability	<140°F	Unable to analyze due to matrix	Unable to analyze due to matrix
Reactivity - HCN - H_2S	 250 mg/kg 500 mg/kg	 <0.40 mg/kg 241 mg/kg	 0.40 mg/kg 20 mg/kg

B - Below Method Detection Limit

AnalytiKEM An American NuKEM Company

AnalytiKEM Inc.
2925 Richmond Avenue
Houston, TX 77098
713/520-1495
713/520-9900
Fax: 713/523-7107

October 2, 1992

ENSR
3000 Richmond
Houston, TX 77098

Attention: Scott Kuykendall

Attached are reports of chemical analyses of samples received September 9, 1992. These analyses are:

Count	Test Code	Test Name	Test Method	Sampled	Matrix
3	Ag - -TCL-HOU	TCLP SILVER	EPA SW-846: 7760, ATOMIC ABSORPTION		TCLP_EXT
3	As - -TCI-HOU	TCLP ARSENIC	EPA SW-846: 6010, ICP		TCLP_EXT
3	BNA - - -HOU	SEMIVOLATILE ORGANICS	EPA SW-846: 3520,8270, LLE,GC/MS		TCLP_EXT
3	Ba - -TCL-HOU	TCLP BARIUM	EPA SW-846: 6010, ICP		TCLP_EXT
3	CORR -S- -HOU	CORROSIVITY ON SOLID	EPA SW-846: 1110, NACE STEEL COUPON	09/03/92	SOIL
3	Cd - -TCL-HOU	TCLP CADMIUM	EPA SW-846: 6010, ICP		TCLP_EXT
3	Cr - -TCL-HOU	TCLP CHROMIUM	EPA SW-846: 6010, ICP		TCLP_EXT
3	FP -S- -HOU	IGNITABILITY ON SOLID	EPA SW-846: 1010, PENSKY MARTIN	09/03/92	SOIL
3	H2S -S-REA-SWL	HYDROGEN SULFIDE, REACTIVE/SLD	EPA SW-846: 7.3.4.2, 9030	09/03/92	SOIL
3	HCN -S-REA-SWL	HYDROCYANIC ACID, REACTIVE/SLD	EPA SW-846: 7.3.3.2, 9010	09/03/92	SOIL
3	Hg - -TCL-HOU	TCLP MERCURY	EPA SW-846: 7470, COLD VAPOR		TCLP_EXT
3	Pb - -TCL-HOU	TCLP LEAD	EPA SW-846: 6010, ICP		TCLP_EXT
3	Se - -TCI-HOU	TCLP SELENIUM	EPA SW-846: 6010, ICP		TCLP_EXT
3	VOA - - -HOU	VOLATILE ORGANIC ANALYSES	EPA SW-846: 8240, GC/MS		TCLP_EXT
3	pH -S-COR-HOU	pH CORROSION ON SOLID	EPA SW-846: 9045	09/03/92	SOIL

Data contained in this report reflect a full quality control review and have met all applicable standards established by AnalytiKEM. AnalytiKEM quality assurance protocols are in accordance with EPA guidelines.

Should you have any questions, do not hesitate to contact me at (713) 520-1495.

LAB NO. A8972 CONT.

Very Truly Yours,

AnalytiKEM

Larry Frantz
Lab Director

LF/lis

Enclosures: Analytical Summary, Analytical Report, Chain of Custody, Sample Receipt Checklist, Quality Control Logs, ANALYTIKEM ID #A8972-1T, ANALYTIKEM ID #A8972-2T, ANALYTIKEM ID #A8972-3T, SWL CERT. #92-09-118-01, SWL CERT. #92-09-118-02, SWL CERT. #92-09-118-03

LAB NO. A8972
PROJECT 1009-001-150 EXXON

AnalytiKEM An American NuKEM Company

AnalytiKEM Inc.
2925 Richmond Avenue
Houston, TX 77098
713/520-1495
713/520-9900
Fax: 713/523-7107

SAMPLE DISPOSAL LETTER

DATE: 10/02/92

TO: Scott Kuykendall

FROM: Larry Frantz, Lab Director

PROJ. NO.: 1009-001-150 LAB NO.: A8972 RECEIVED:09/09/92
EXXON

It is the policy of AnalytiKEM Laboratories to dispose of unanalyzed portions of samples thirty days following submittal of the hard copy data package. Samples from lab number A8972 are due for disposal on November 6, 1992.

Please indicate your preference for disposal below and return this form to Lab Receiving personnel by October 23, 1992. **No response will be interpreted as permission to dispose of the samples on November 6, 1992 and charge your project accordingly.**

( )A. AnalytiKEM's preferred policy for disposal is to dispose of unused samples, including samples not analyzed, by drumming and transporting by a federally licensed hazardous waste transportation firm at a cost of $6.50/Field ID. **In an effort to present all relative charges in a timely manner, disposal charges will appear upon this project's billing summary unless this letter is returned with instructions indicating otherwise.**

( )B. AnalytiKEM will return remaining samples, including samples not authorized for analysis to the originating site at our expense.
ADDRESS OF THE
ORIGINATING SITE: _____

_____

( )C. AnalytiKEM will hold your sample at a cost of $20.00/Field ID per quarter for refrigerated storage or $6.50/Field ID per quarter for ambient storage. The project will be billed in advance each quarter based upon the number of samples in storage at the beginning of the quarter. The minimum storage fee per project will be $50.00 to cover administrative costs.

( ) Refrigerated ( ) Ambient ____ Number of Samples or ALL

Should you have any questions, do not hesitate to contact me at (713) 520-1495.
SIGNATURE: _____
LF/lis

LAB NO. A8972
PROJECT 1009-001-150 EXXON

B09218313

Page 1 of 2

AnalytiKEM

An American NuKEM Company

2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.: A009-001-150,160

Client/Project Name: EXXON

Project Location: DALLAS / MARLAND

Lab ID No	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
1	DP-1	9-3-92 0830		✓	4oz Tall x2	Soil	4°C	TCLP Volatiles	
1	DP-1	9-3-92 0830		✓	16oz Amb	Soil		TCLP Semi Volatiles	
1	DP-1	9-3-92 0830		✓	16oz SSwm	Soil		TCLP Metals	
1	DP-1	9-3-92 0830		✓	8oz SSwm	Soil		TPH (GC)	
1	DP-1	9-3-92 0830		✓	8oz Amb	Soil		Reactivity	
1	DP-1	9-3-92 0830		✓	8oz SSwm	Soil		ph, corrosivity, flashpoint	
2	DP-2	9-3-92 0930		✓	4oz Tall x2	Soil		TCLP Volatiles	
2	DP-2	9-3-92 0930		✓	16oz Amb	Soil		TCLP Semi Volatiles	
2	DP-2	9-3-92 0930		✓	16oz SSwm	Soil		TCLP Metals	
2	DP-2	9-3-92 0930		✓	8oz SSwm	Soil	↓	TPH (GC)	

Samplers: (Signature) [signature]

Affiliation: ENSR

Relinquished by: (Signature) [signature] Date: 9-3-92 Time: 1200

Relinquished by: (Signature) Date: Time:

Relinquished by: (Signature) Date: Time:

Received by: (Signature) Date: Time:

Received by: (Signature) Date: Time:

Received by Laboratory: (Signature) [signature] Date: 9-9-92 Time: 9:02

COC Seal No.: (Intact)

REMARKS:

Data Results To:
1. Jay Swindle
2.

Laboratory No.: A8972

AnalytiKEM
An American NuKEM Company
2925 RICHMOND AVENUE HOUSTON, TX 77098 (713) 520-1495 FAX: (713) 523-7107

Analysis Request and Chain of Custody Record

Project no.: 1009-001-150160
Client/Project Name: Exxon
Project Location: DelPaso / Morland

Lab ID No	Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
2	DP-2	9-3-92 0930		L	8oz Amb	So-1	4°C	Reactivity	
2	DP-2	9-3-92 0930		L	8oz SSCun	So.1	4°C	gh, corrosivity, flashpoint	
3	MR-1	9-3-92 1100		L	40z Tall x2	So.1	4°C	TCLP VOA	Jar broken in lab 9-9-92
3	MR-1	9-3-92 1100		L	16oz Amb	So.1	4°C	TCLP Semi VOA - Lysimeter received	
3	MR-1	9-3-92 1100		L	16oz SSCun	So.1	4°C	TCLP Metals	
3	MR-1	9-3-92 1100		L	8oz SSCun	So.1	4°C	TPH (6C)	
3	MR-1	9-3-92 1100		L	8oz Amb	So.1	4°C	Reactivity	
3	MR-1	9-3-92 1100		L	8oz SSCun	So.1	4°C	gh, corrosivity, flashpoint	

Samplers: (Signature) [signature]
Affiliation

Relinquished by: (Signature) [signature] Date: 9-3-92 Time: 1200
Relinquished by: (Signature) Date: Time:
Relinquished by: (Signature) Date: Time:

Received by: (Signature) Date: Time:
Received by: (Signature) Date: Time:
Received by Laboratory: (Signature) Daniel Deal Date: 9-5-92 Time: 9:02

COC Seal No:
Intact:

REMARKS:

Data Results To:
1. JAY Swindle
2.

Laboratory No.: A8922

ANALYTIKEM LABORATORIES
SAMPLE RECEIPT CHECKLIST

Client Exxon Project Number 005-001-50160 Laboratory Number 78522

1. ✓ Shipped — Notes: Fed Ex #946353132
   ____ Hand Delivered — No Ticket
2. ✓ COC Present on Receipt — Notes:
   ____ No COC
3. ____ COC Tape on Shipping Container — Notes:
   ✓ No COC Tape on Shipping Container — Notes:
4. ✓ Samples Broken/Leaking — Notes: See Below
   ✓ Sample Intact on Receipt — Rusty Samples
   ____ Other (See Notes)
5. ✓ Ambient on Receipt — Notes: See Below
   ____ Chilled on Receipt
6. ____ Samples Preserved Correctly — Notes:
   ____ Improper Preservatives
   ✓ N/A (None Recommended)
   ____ Other (See Notes)
7. ✓ Received Within Holding Time — Notes:
   ____ Not Received Within Holding Time
   ____ N/A (None Recommended)
   ____ Other (See Notes)
8. ____ COC Tapes on Samples — Notes:
   ✓ No COC Tapes on Samples
9. ✓ Discrepancies Between COC and Sample Labels — Notes: See Below
   ____ No Discrepancies Noted
   ____ N/A (No COC Received)

Inspected and Logged in by: [signature] Date/Time 9-9-92 9:02

Additional Comments: Samples should have arrived Friday 9-4-92 but samples didn't ship them because there were no labels. Scott K Called on 9-8-92 & said the samples would be lost & ambient to run anyway. One of the 4oz Tall jars TCLP Volatiles does not have

AnalytiKEM-Houston

Analytical Summary
10/13/92 11:12

Lab Number: A8972
Project: 1009-001-150
EXXON

Lab ID / *Field ID* / Test /*Matrix*	1 DP-1 SOIL	2 DP-2 SOIL	3 MR-1 SOIL	1T DP-1/ TCLP TCLP_EXT	2T DP-2/ TCLP TCLP_EXT	3T MR-1/ TCLP TCLP_EXT
Ag - -TCL-HOU	--	--	--	<0.01* MG/L	<0.01* MG/L	<0.01* MG/L
(MDL)				*(0.01)**	*(0.01)**	*(0.01)**
As - -TCI-HOU	--	--	--	<0.2* MG/L	<0.2* MG/L	<0.2* MG/L
(MDL)				*(0.2)**	*(0.2)**	*(0.2)**
BNA - - -HOU	--	--	--	ATTACHED UG/L	ATTACHED UG/L	ATTACHED UG/L
(MDL)				*()**	*()**	*()**
Ba - -TCL-HOU	--	--	--	1.2* MG/L	1.2* MG/L	1.2* MG/L
(MDL)				*(0.5)**	*(0.5)**	*(0.5)**
CORR -S- -HOU	SEE REM*	SEE REM*	SEE REM*	--	--	--
(MDL)	*()**	*()**	*()**			
Cd - -TCL-HOU	--	--	--	<0.010* MG/L	<0.010* MG/L	<0.010* MG/L
(MDL)				*(0.010)**	*(0.010)**	*(0.010)**
Cr - -TCL-HOU	--	--	--	<0.05* MG/L	<0.05* MG/L	<0.05* MG/L
(MDL)				*(0.05)**	*(0.05)**	*(0.05)**
FP -S- -HOU	SEE REM*	SEE REM*	SEE REM*	--	--	--
(MDL)	*()**	*()**	*()**			
H2S -S-REA-SWL	ATTACHED PPM	ATTACHED PPM	ATTACHED PPM	--	--	--
(MDL)	*()**	*()**	*()**			

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: _____ Date: 10/13/92 _____ Date: 10/13/92

***** CONTINUED *****

AnalytiKEM-Houston

Analytical Summary
10/13/92 11:12

Lab Number: A8972
Project: 1009-001-150
EXXON

Lab ID / *Field ID* / *Test /Matrix*	1 DP-1 SOIL	2 DP-2 SOIL	3 MR-1 SOIL	1T DP-1/ TCLP TCLP_EXT	2T DP-2/ TCLP TCLP_EXT	3T MR-1/ TCLP TCLP_EXT
HCN -S-REA-SWL	ATTACHED PPM	ATTACHED PPM	ATTACHED PPM	--	--	--
(MDL)	*()**	*()**	*()**			
Hg - -TCL-HOU	--	--	--	<0.001* MG/L	<0.001* MG/L	<0.001* MG/L
(MDL)				*(0.001)**	*(0.001)**	*(0.001)**
Pb - -TCL-HOU	--	--	--	0.1* MG/L	0.02 MG/L	0.02 MG/L
(MDL)				*(0.02)**	*(0.02)**	*(0.02)**
Se - -TCI-HOU	--	--	--	<0.2* MG/L	<0.2* MG/L	<0.2* MG/L
(MDL)				*(0.2)**	*(0.2)**	*(0.2)**
TPH -S-GC -HOU	34 MG/KG	<25 MG/KG	270J* MG/KG	--	--	--
(MDL)	*(25)*	*(25)*	*(460)**			
VOA - - -HOU	--	--	--	ATTACHED UG/L	ATTACHED UG/L	ATTACHED UG/L
(MDL)				*()**	*()**	*()**
pH -S-COR-HOU	8.57 UNITS	8.13 UNITS	8.06 UNITS	--	--	--
(MDL)	*(0.01)*	*(0.01)*	*(0.01)*			

* Please see attached Analytical Report for remarks.

Signatures of approval indicate quality assurance-quality control verification of analytical results, billing and enclosed documentation.

Approvals: _____ Date: 10/13/92 _____ Date: 10/13/92

AnalytiKEM-Houston

Analytical Report
10/13/92 11:10

EXXON	Field ID: DP-1		Date Sampled: 09/03/92
Proj. No.: 1009-001-150	Lab ID: 1		Time Sampled: 830
Lab No.: A8972	Matrix: SOIL	(COMPOSITE)	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
CORR -S- -HOU CORROSIVITY ON SOLID EPA SW-846: 1110, NACE STEEL COUPON	SEE REM* *1			/ /
FP -S- -HOU IGNITABILITY ON SOLID EPA SW-846: 1010, PENSKY MARTIN	SEE REM* *2,3			/ /
H2S -S-REA-SWL HYDROGEN SULFIDE, REACTIVE/SLD EPA SW-846: 7.3.4.2, 9030	ATTACHED *4	PPM		09/14/92
HCN -S-REA-SWL HYDROCYANIC ACID, REACTIVE/SLD EPA SW-846: 7.3.3.2, 9010	ATTACHED *4	PPM		09/14/92
TPH -S-GC -HOU PETROLEUM HYDROCARBON BY GC EPA SW-846: 8015 MOD, GC	34	MG/KG	25	Ext.: 09/15/92 Anal.:09/16/92
pH -S-COR-HOU pH CORROSION ON SOLID EPA SW-846: 9045	8.57	UNITS	0.01	09/16/92 1620

*1 *UNABLE TO ANALYZE DUE TO SOLID MATRIX
*2 ABSORPTION OF WATER OR MANUAL FRICTION
*3 FLASHPOINT N/A, NON-LIQUID MATRIX NO FIRE CAUSED BY IGNITION
*4 SEE SWL CERT. #92-09-118-01

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: DP-2	Date Sampled: 09/03/92
Proj. No.: 1009-001-150	Lab ID: 2	Time Sampled: 930
Lab No.: A8972	Matrix: SOIL (COMPOSITE)	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
CORR -S- -HOU CORROSIVITY ON SOLID EPA SW-846: 1110, NACE STEEL COUPON	SEE REM* *1			/ /
FP -S- -HOU IGNITABILITY ON SOLID EPA SW-846: 1010, PENSKY MARTIN	SEE REM* *2,3			/ /
H2S -S-REA-SWL HYDROGEN SULFIDE, REACTIVE/SLD EPA SW-846: 7.3.4.2, 9030	ATTACHED *4	PPM		09/14/92
HCN -S-REA-SWL HYDROCYANIC ACID, REACTIVE/SLD EPA SW-846: 7.3.3.2, 9010	ATTACHED *4	PPM		09/14/92
TPH -S-GC -HOU PETROLEUM HYDROCARBON BY GC EPA SW-846: 8015 MOD, GC	<25	MG/KG	25	Ext.: 09/15/92 Anal.:09/16/92
pH -S-COR-HOU pH CORROSION ON SOLID EPA SW-846: 9045	8.13	UNITS	0.01	09/16/92 1620

*1 *UNABLE TO ANALYZE DUE TO SOLID MATRIX
*2 ABSORPTION OF WATER OR MANUAL FRICTION
*3 FLASHPOINT N/A, NON-LIQUID MATRIX NO FIRE CAUSED BY IGNITION
*4 SEE SWL CERT. #92-09-118-02

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: MR-1	Date Sampled: 09/03/92
Proj. No.: 1009-001-150	Lab ID: 3	Time Sampled: 1100
Lab No.: A8972	Matrix: SOIL (COMPOSITE)	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
CORR -S- -HOU CORROSIVITY ON SOLID EPA SW-846: 1110, NACE STEEL COUPON	SEE REM* *1			/ /
FP -S- -HOU IGNITABILITY ON SOLID EPA SW-846: 1010, PENSKY MARTIN	SEE REM* *2,3			/ /
H2S -S-REA-SWL HYDROGEN SULFIDE, REACTIVE/SLD EPA SW-846: 7.3.4.2, 9030	ATTACHED *4	PPM		09/14/92
HCN -S-REA-SWL HYDROCYANIC ACID, REACTIVE/SLD EPA SW-846: 7.3.3.2, 9010	ATTACHED *4	PPM		09/14/92
TPH -S-GC -HOU PETROLEUM HYDROCARBON BY GC EPA SW-846: 8015 MOD, GC	270J* *5	MG/KG	460	Ext.: 09/15/92 Anal.:09/16/92
pH -S-COR-HOU pH CORROSION ON SOLID EPA SW-846: 9045	8.06	UNITS	0.01	09/16/92 1620

*1 *UNABLE TO ANALYZE DUE TO SOLID MATRIX
*2 ABSORPTION OF WATER OR MANUAL FRICTION
*3 FLASHPOINT N/A, NON-LIQUID MATRIX NO FIRE CAUSED BY IGNITION
*4 SEE SWL CERT. #92-09-118-03
*5 RESULT DETECTED BELOW MDL

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: DP-1/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 1T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag - -TCL-HOU TCLP SILVER EPA SW-846: 7760, ATOMIC ABSORPTION	<0.01* *1	MG/L	0.01	09/21/92 1350
As - -TCI-HOU TCLP ARSENIC EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
BNA - - -HOU SEMIVOLATILE ORGANICS EPA SW-846: 3520,8270, LLE,GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/18/92 Anal.:09/23/92
Ba - -TCL-HOU TCLP BARIUM EPA SW-846: 6010, ICP	1.2* *1	MG/L	0.5	09/24/92 853
Cd - -TCL-HOU TCLP CADMIUM EPA SW-846: 6010, ICP	<0.010* *1	MG/L	0.010	09/24/92 853
Cr - -TCL-HOU TCLP CHROMIUM EPA SW-846: 6010, ICP	<0.05* *1	MG/L	0.05	09/24/92 853
Hg - -TCL-HOU TCLP MERCURY EPA SW-846: 7470, COLD VAPOR	<0.001* *1	MG/L	0.001	09/22/92 1600
Pb - -TCL-HOU TCLP LEAD EPA SW-846: 6010, ICP	0.1* *1	MG/L	0.02	09/24/92 853

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-1T

***** CONTINUED *****

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: DP-1/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 1T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Se - -TCI-HOU TCLP SELENIUM EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
VOA - - -HOU VOLATILE ORGANIC ANALYSES EPA SW-846: 8240, GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/17/92 Anal.:09/17/92

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-1T

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: DP-2/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 2T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag - -TCL-HOU TCLP SILVER EPA SW-846: 7760, ATOMIC ABSORPTION	<0.01* *1	MG/L	0.01	09/21/92 1350
As - -TCI-HOU TCLP ARSENIC EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
BNA - - -HOU SEMIVOLATILE ORGANICS EPA SW-846: 3520,8270, LLE,GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/18/92 Anal.:09/23/92
Ba - -TCL-HOU TCLP BARIUM EPA SW-846: 6010, ICP	1.2* *1	MG/L	0.5	09/24/92 853
Cd - -TCL-HOU TCLP CADMIUM EPA SW-846: 6010, ICP	<0.010* *1	MG/L	0.010	09/24/92 853
Cr - -TCL-HOU TCLP CHROMIUM EPA SW-846: 6010, ICP	<0.05* *1	MG/L	0.05	09/24/92 853
Hg - -TCL-HOU TCLP MERCURY EPA SW-846: 7470, COLD VAPOR	<0.001* *1	MG/L	0.001	09/22/92 1600
Pb - -TCL-HOU TCLP LEAD EPA SW-846: 6010, ICP	0.02 *1	MG/L	0.02	09/24/92 853

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-2T

***** CONTINUED *****

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: DP-2/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 2T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Se - -TCI-HOU TCLP SELENIUM EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
VOA - - -HOU VOLATILE ORGANIC ANALYSES EPA SW-846: 8240, GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/17/92 Anal.:09/17/92

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-2T

AnalytiKEM-Houston

Analytical Report
10/13/92 11:11

EXXON	Field ID: MR-1/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 3T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Ag - -TCL-HOU TCLP SILVER EPA SW-846: 7760, ATOMIC ABSORPTION	<0.01* *1	MG/L	0.01	09/21/92 1350
As - -TCI-HOU TCLP ARSENIC EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
BNA - - -HOU SEMIVOLATILE ORGANICS EPA SW-846: 3520,8270, LLE,GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/18/92 Anal.:09/23/92
Ba - -TCL-HOU TCLP BARIUM EPA SW-846: 6010, ICP	1.2* *1	MG/L	0.5	09/24/92 853
Cd - -TCL-HOU TCLP CADMIUM EPA SW-846: 6010, ICP	<0.010* *1	MG/L	0.010	09/24/92 853
Cr - -TCL-HOU TCLP CHROMIUM EPA SW-846: 6010, ICP	<0.05* *1	MG/L	0.05	09/24/92 853
Hg - -TCL-HOU TCLP MERCURY EPA SW-846: 7470, COLD VAPOR .	<0.001* *1	MG/L	0.001	09/22/92 1600
Pb - -TCL-HOU TCLP LEAD EPA SW-846: 6010, ICP	0.02 *1	MG/L	0.02	09/24/92 853

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-3T

***** CONTINUED *****

AnalytiKEM-Houston

Analytical Report
10/13/92 11:12

EXXON	Field ID: MR-1/TCLP	Date Sampled: / /
Proj. No.: 1009-001-150	Lab ID: 3T	Time Sampled:
Lab No.: A8972	Matrix: TCLP_EXT	Date Received:09/09/92

Parameter (Test Code) (Test Name) (Test Method)	Concentration	Units	Method Detection Limit	Date/Time Analysis Performed
Se - -TCI-HOU TCLP SELENIUM EPA SW-846: 6010, ICP	<0.2* *1	MG/L	0.2	09/24/92 853
VOA - - -HOU VOLATILE ORGANIC ANALYSES EPA SW-846: 8240, GC/MS	ATTACHED *2,1	UG/L		Ext.: 09/17/92 Anal.:09/17/92

*1 *RESULT IS NOT SPIKE CORRECTED
*2 SEE ANALYTIKEM ID #A8972-3T

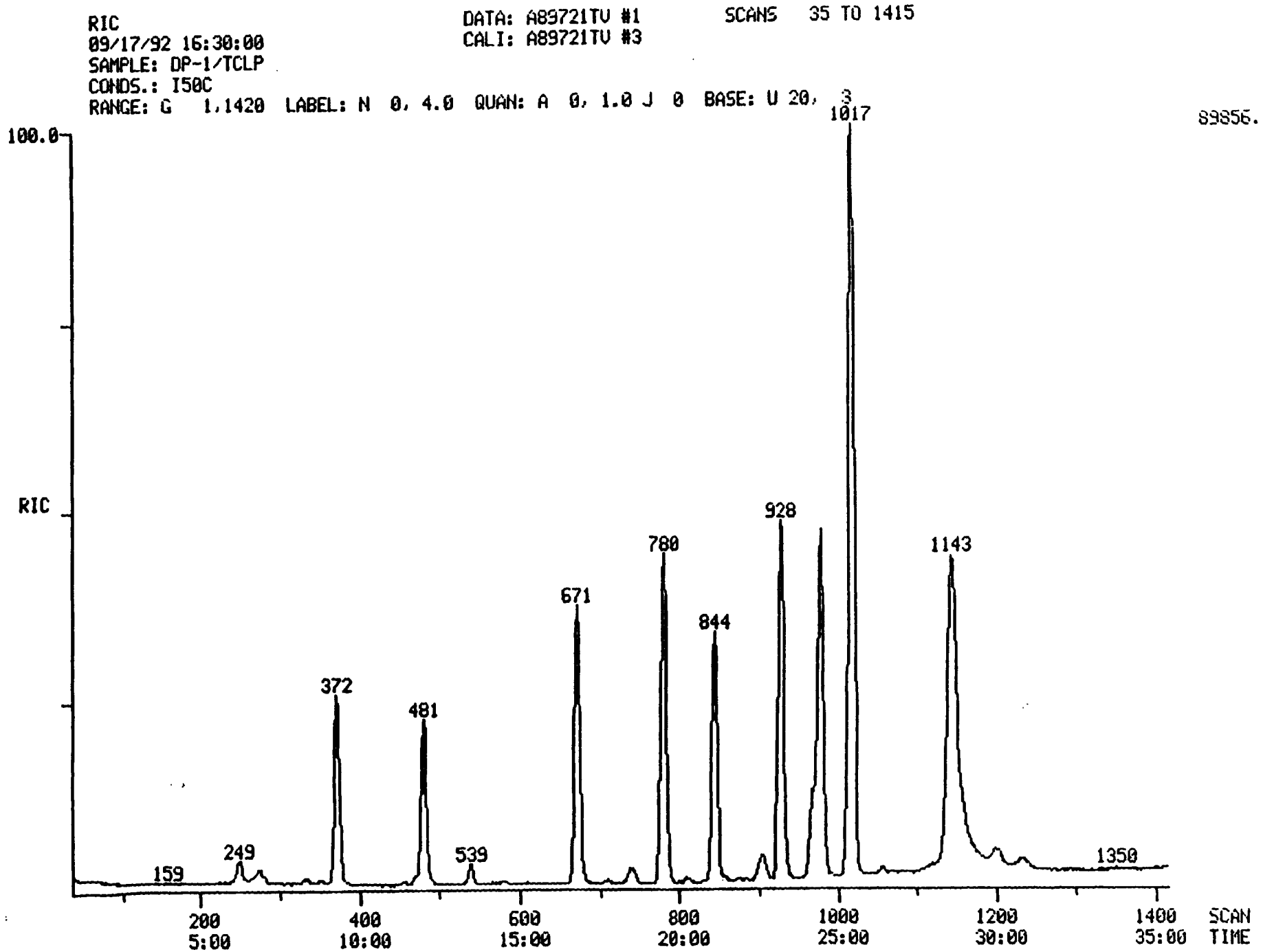
ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	A8972-1T	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	DP-1-TCLP	Percent Moisture:	100.0	Dilution Factor:	1.0

TCLP VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-35-4	1,1-Dichloroethene	5	<	71-43-2	Benzene	5	<
67-66-3	Chloroform	5	<	127-18-4	Tetrachloroethene	5	<
107-06-2	1,2-Dichloroethane	5	<	108-90-7	Chlorobenzene	5	<
78-93-3	2-Butanone	10	<				
56-23-5	Carbon Tetrachloride . . .	5	<				

The Lab ID for data on this page is A89721TV.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.
Data not spike corrected.


RIC
09/17/92 16:30:00
SAMPLE: DP-1/TCLP
CONDS.: I50C
DATA: A89721TU #1
CALI: A89721TU #3
SCANS 35 TO 1415
RANGE: G 1.1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
89856.
100.0
RIC
159
249
372
481
539
671
780
844
928
1017
1143
1350
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

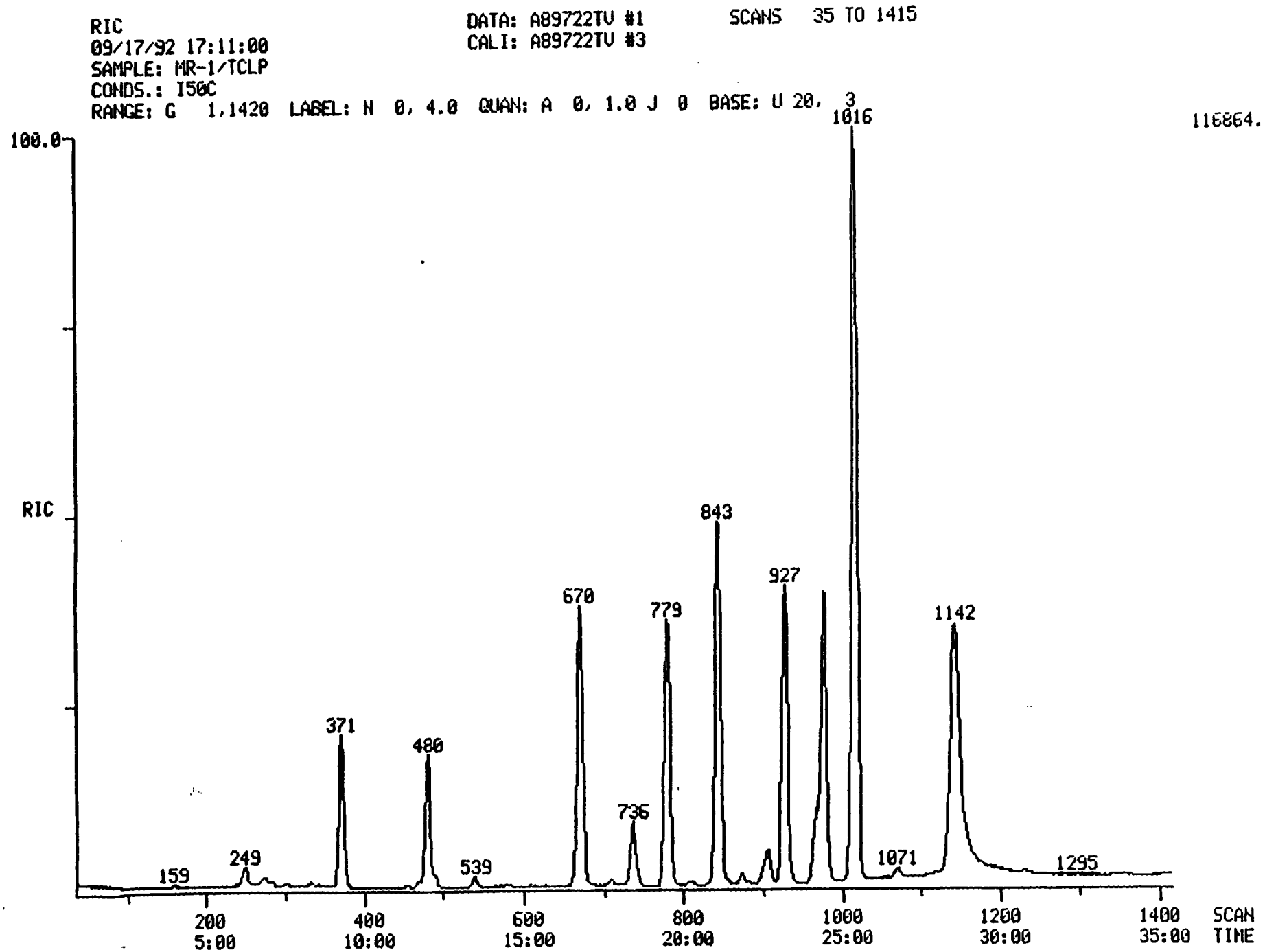
ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-H.u	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	A8972-2T	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	MR-1-TCLP	Percent Moisture:	100.0	Dilution Factor:	1.0

TCLP VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-35-4	1,1-Dichloroethene	5	<	71-43-2	Benzene	5	<
67-66-3	Chloroform	5	<	127-18-4	Tetrachloroethene	5	<
107-06-2	1,2-Dichloroethane	5	<	108-90-7	Chlorobenzene	5	<
78-93-3	2-Butanone	10	<				
56-23-5	Carbon Tetrachloride . . .	5	<				

The Lab ID for data on this page is A89722TV.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.
Data not spike corrected.


RIC
09/17/92 17:11:00
SAMPLE: MR-1/TCLP
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: A89722TV #1
CALI: A89722TV #3
SCANS 35 TO 1415
116864.
100.0
RIC
159
249
371
480
539
670
736
779
843
927
1016
1071
1142
1295
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

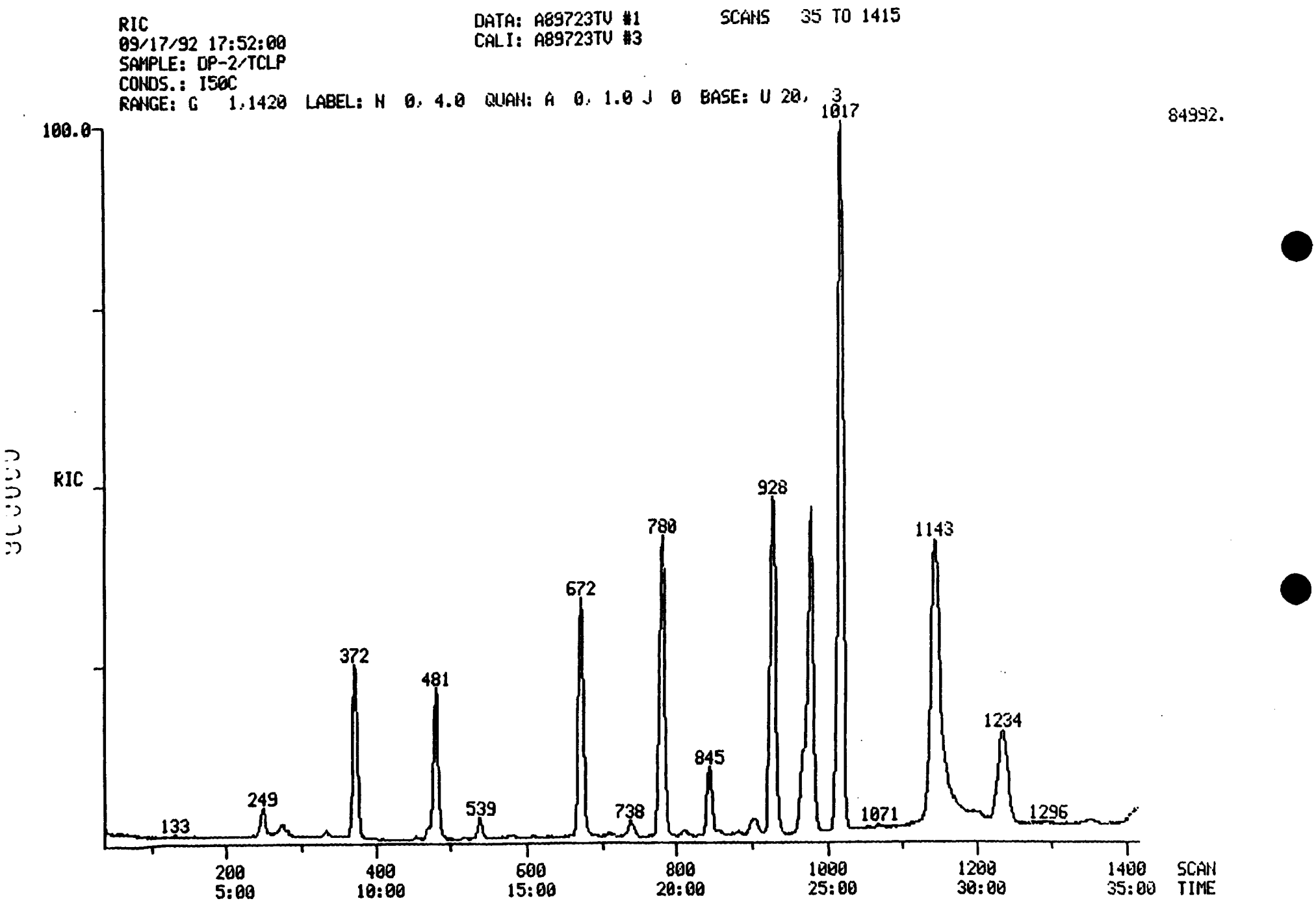
ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	A8972-3T	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	DP-2-TCLP	Percent Moisture:	100.0	Dilution Factor:	1.0

TCLP VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-35-4	1,1-Dichloroethene	5	<	71-43-2	Benzene	5	<
67-66-3	Chloroform	5	<	127-18-4	Tetrachloroethene	5	<
107-06-2	1,2-Dichloroethane	5	<	108-90-7	Chlorobenzene	5	<
78-93-3	2-Butanone	10	<				
56-23-5	Carbon Tetrachloride . . .	5	<				

The Lab ID for data on this page is A89723TV.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.
Data not spike corrected.


RIC
09/17/92 17:52:00
SAMPLE: DP-2/TCLP
CONDS.: I50C
RANGE: G 1.1420 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3
DATA: A89723TV #1
CALI: A89723TV #3
SCANS 35 TO 1415
84992.
100.0
RIC
133
249
372
481
539
672
738
780
845
928
1017
1071
1143
1234
1296
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

BROMOFLUOROBENZENE

Tuning Report
09/17/92 12:05:00 + 7:00
Instrument: I50C
#273 to #287 averaged - #307 to #318 - #255 to #260
Case Number: E

Data: BF091792C1 # 280
Cali: BF091792C1 # 3
Analyst: BPB
Laboratory: Z

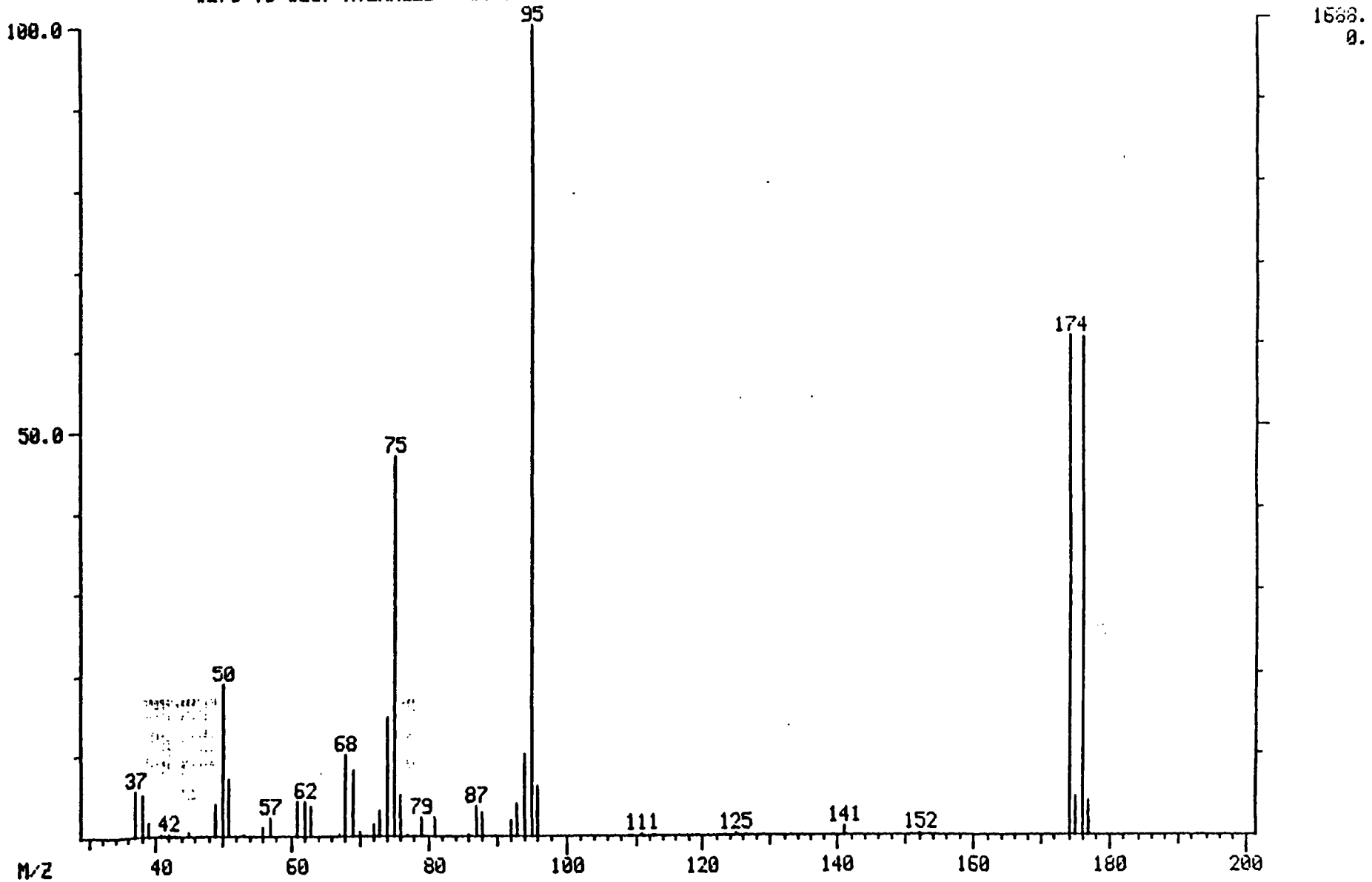
Base m/z: 95
RIC: 7000.
Acct. No.: 8506-090
Contract: Z

			Ion Abundance Criteria				
m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
50	317.	18.8	15.0	40.0	95	18.8	PASS
75	795.	47.1	30.0	60.0	95	47.1	PASS
95	1688.	100.0	100.0	---	---	100.0	PASS
96	104.	6.2	5.0	9.0	95	6.2	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	1032.	61.1	50.0	---	95	61.1	PASS
175	81.	4.8	5.0	9.0	174	7.8	PASS
176	1024.	60.7	95.0	101.0	174	99.2	PASS
177	71.	4.2	5.0	9.0	176	6.9	PASS

MASS SPECTRUM
09/17/92 12:05:00 + 7:00
SAMPLE: BFB CALIBRATION
CONDS.: I50C
TEMP: 225 DEG. C
#273 TO #287 AVERAGED - #307 TO #318 - #255 TO #260

DATA: BF091792C1 #280
CALI: BF091792C1 #3

BASE M/Z: 95
RIC: 7000.



Mass List Data: BF091792C1 # 280 Base m/z: 95
09/17/92 12:05:00 + 7:00 Cali: BF091792C1 # 3 RIC: 7000.
Sample: BFB CALIBRATION
Conds.: I50C
#273 to #287 averaged - #307 to #318 - #255 to #260

36 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

Mass		% RA	Inten.
36?	S	0.12	2.
37?	S	5.51	93.
38?	S	5.09	86.
39?	S	1.66	28.
41?	S	0.18	3.
42?	S	0.18	3.
45?	S	0.59	10.
49?	S	3.91	66.
50?	S	18.78	317.
51?	S	6.93	117.
53?	S	0.18	3.
56?	S	1.13	19.
57?	S	2.13	36.
60?	S	0.06	1.
61?	S	4.03	68.
62?	S	4.03	68.
63?	S	3.50	59.
67?	S	0.18	3.
68?	S	10.01	169.
69	S	8.12	137.
70	S	0.65	11.
72	S	1.36	23.
73	S	3.14	53.
74	S	14.57	246.
75	S	47.10	795.
76	S	4.86	82.
77	S	0.24	4.
79	S	2.31	39.
81	S	2.07	35.
84	S	0.12	2.
86	S	0.18	3.
87	S	3.67	62.
88	S	2.67	45.
92	S	2.01	34.
93	S	3.97	67.
94	S	9.83	166.
95	S	100.00	1688.
96	S	6.16	104.
111	S	0.24	4.
113	S	0.06	1.
125	S	0.18	3.
129	S	0.06	1.
141	S	1.01	17.
152	S	0.18	3.
155	S	0.12	2.
174	S	61.14	1032.
175	S	4.80	81.
176	S	60.66	1024.
177	S	4.21	71.

CONTINUING CALIBRATION CHECK
VOLATILE HSL COMPOUNDS

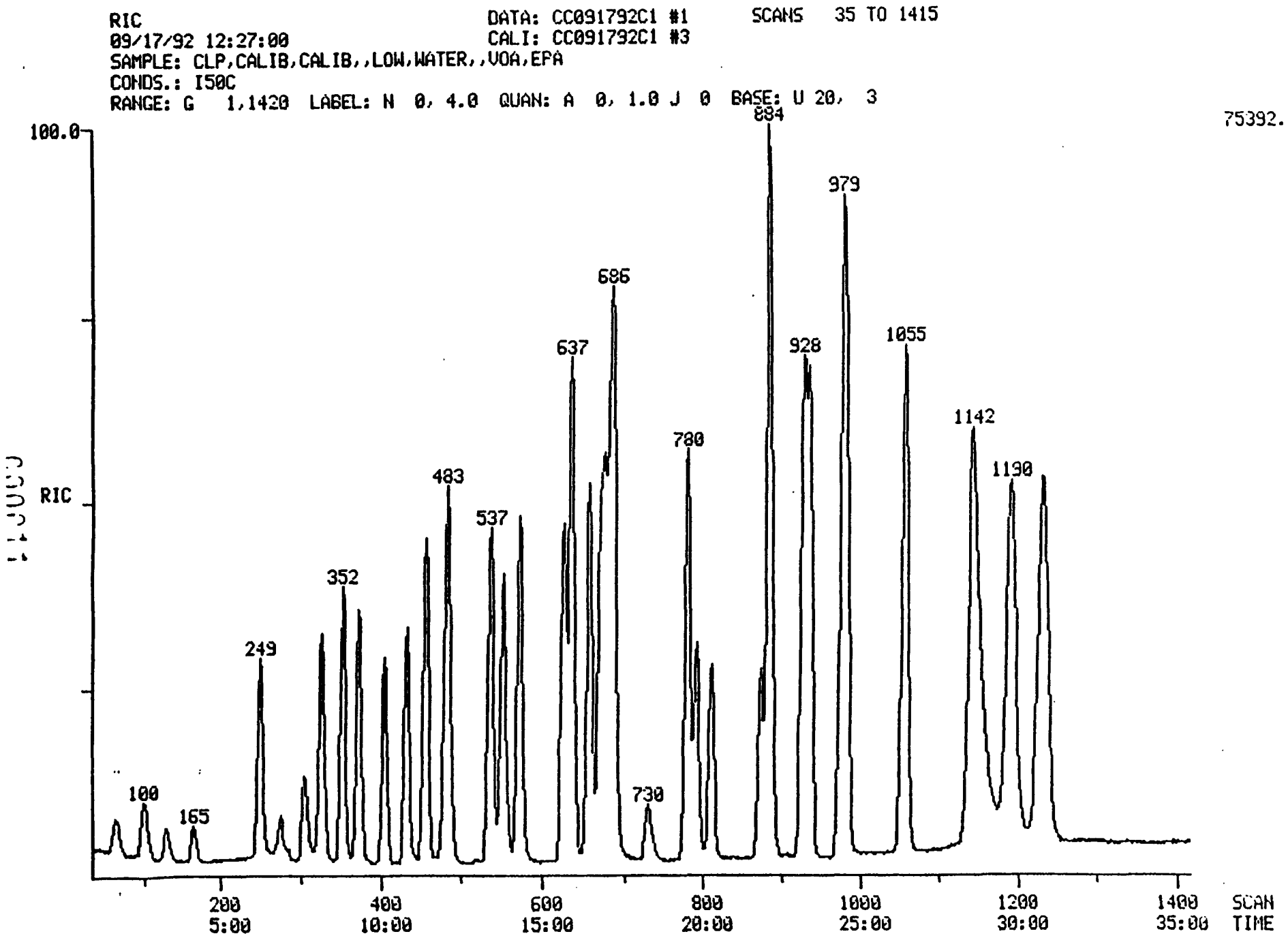
Case No: STAND Region: _____ Calibration Date: 09/17/92
Contractor: AnalytiKEM-Hou Time: 12:27
Contract No: _____ Laboratory ID: CC)91792C1
Instrument ID: I50C Initial Cali. Date: 09/15/92

Minimum RF for SPCC is 0.300 (1) Maximum %D for CCC is 25%

Compound	AVE RF	RF(50)	% D	CCC	SPCC
Chloromethane	0.985	0.770	21.8		* *
Bromomethane	0.988	0.840	15.0		
Vinyl Chloride	0.998	0.777	22.1	*	
Chloroethane	0.640	0.474	25.9		
Methylene Chloride	1.380	1.168	15.4		
Acetone	0.279	0.714	-155.9		
Carbon Disulfide	1.959	2.150	-9.7		
1,1-Dichloroethene	1.425	1.316	7.6	*	
1,1-Dichloroethane	3.633	3.118	14.2		* *
trans-1,2-Dichloroethene	1.663	1.447	13.0		
Chloroform	4.353	3.833	11.9	*	
1,2-Dichloroethane	3.140	2.821	10.2		
2-Butanone	0.026	0.057	-119.2		
1,1,1-Trichloroethane	0.694	0.671	3.3		
Carbon Tetrachloride	0.522	0.496	5.0		
Vinyl Acetate	0.090	0.091	-1.1		
Bromodichloromethane	0.717	0.706	1.5		
1,2-Dichloropropane	0.439	0.413	5.9	*	
cis-1,3-Dichloropropene	0.588	0.578	1.7		
Trichloroethene	0.394	0.377	4.3		
Dibromochloromethane	0.512	0.505	1.4		
1,1,2-Trichloroethane	0.335	0.319	4.8		
Benzene	0.934	0.906	3.0		
Trans-1,3-Dichloropropene	0.523	0.498	4.8		
Bromoform	0.348	0.333	4.3		* *
4-Methyl-2-Pentanone	0.469	0.548	-16.8		
2-Hexanone	0.332	0.572	-72.3		
Tetrachloroethene	0.376	0.363	3.5		
1,1,2,2-Tetrachloroethane	0.654	0.657	-0.5		* *
Toluene	0.785	0.744	5.2	*	
Chlorobenzene	0.974	0.897	7.9		* *
Ethylbenzene	0.542	0.525	3.1	*	
Styrene	0.921	1.046	-13.6		
Xylene (total)	0.581	0.651	-12.0		

RF(50) - Response Factor from daily standard file at 50 ug/l
AVE RF - Average Response Factor from initial calibration Form VI
%D - - - Percent Difference
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Mininum RF for Bromoform is 0.250

Form VII


RIC
09/17/92 12:27:00
SAMPLE: CLP,CALIB,CALIB,,LOW,WATER,,VOA,EPA
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: CC091792C1 #1
CALI: CC091792C1 #3
SCANS 35 TO 1415
75392.
100.0
RIC
100
165
249
352
483
537
637
686
730
780
884
928
979
1055
1142
1190
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

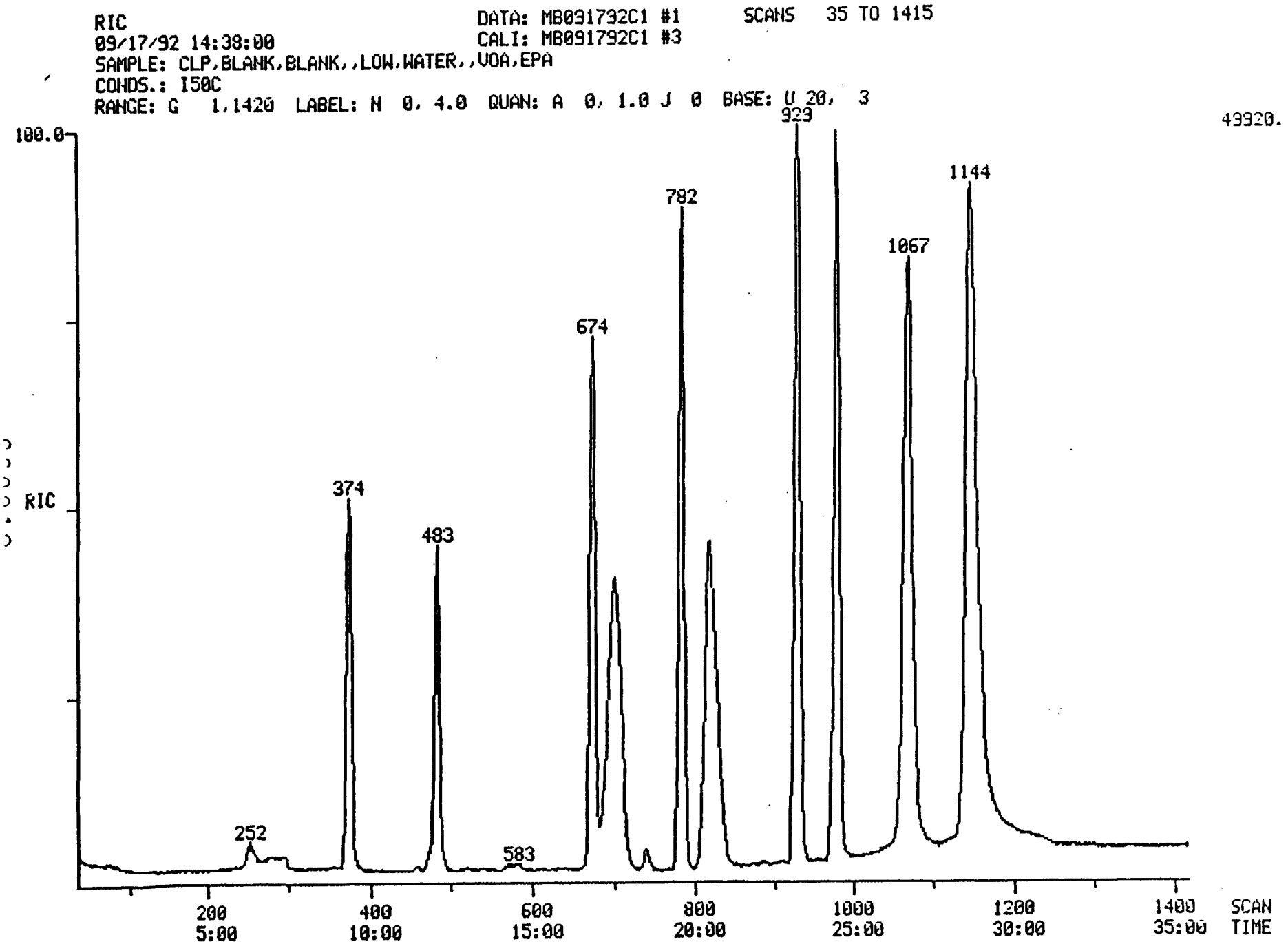
VOLATILE ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	MB091792C1	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	MB091792C1	Percent Moisture:	100.0	Dilution Factor:	1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	<	78-87-5	1,2-Dichloropropane	5	<
74-83-9	Bromomethane	10	<	10061-01-5	cis-1,3-Dichloropropene	5	<
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-00-3	Chloroethane	10	<	124-48-1	Dibromochloromethane	5	<
75-09-2	Methylene Chloride	6		79-00-5	1,1,2-Trichloroethane	5	<
67-64-1	Acetone	5	≈	71-43-2	Benzene	5	<
75-15-0	Carbon Disulfide	5	<	10061-02-6	Trans-1,3-Dichloropropene	5	<
75-35-4	1,1-Dichloroethene	5	<	110-75-8	2-Chloroethylvinyl ether	10	<
75-34-3	1,1-Dichloroethane	5	<	75-25-2	Bromoform	5	<
156-60-5	trans-1,2-Dichloroethene	5	<	108-10-1	4-Methyl-2-Pentanone	10	<
67-66-3	Chloroform	5	<	591-78-6	2-Hexanone	10	<
107-06-2	1,2-Dichloroethane	5	<	127-18-4	Tetrachloroethene	5	<
78-93-3	2-Butanone	10	<	79-34-5	1,1,2,2-Tetrachloroethane	5	<
71-55-6	1,1,1-Trichloroethane	5	<	108-88-3	Toluene	5	<
56-23-5	Carbon Tetrachloride	5	<	108-90-7	Chlorobenzene	5	<
108-05-4	Vinyl Acetate	5	<	100-41-4	Ethylbenzene	5	<
75-27-4	Bromodichloromethane	5	<	100-42-5	Styrene	5	<
				1330-20-7	Xylene (total)	5	<

The Lab ID for data on this page is MB091792C1.
≈ - Reported value is less than the detection limit.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.


RIC
09/17/92 14:38:00
SAMPLE: CLP,BLANK,BLANK,,LOW,WATER,,VOA,EPA
CONDS.: I50C
RANGE: G 1,1420 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: MB091792C1 #1
CALI: MB091792C1 #3
SCANS 35 TO 1415
43920.
100.0
RIC
252
374
483
583
674
782
923
1067
1144
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

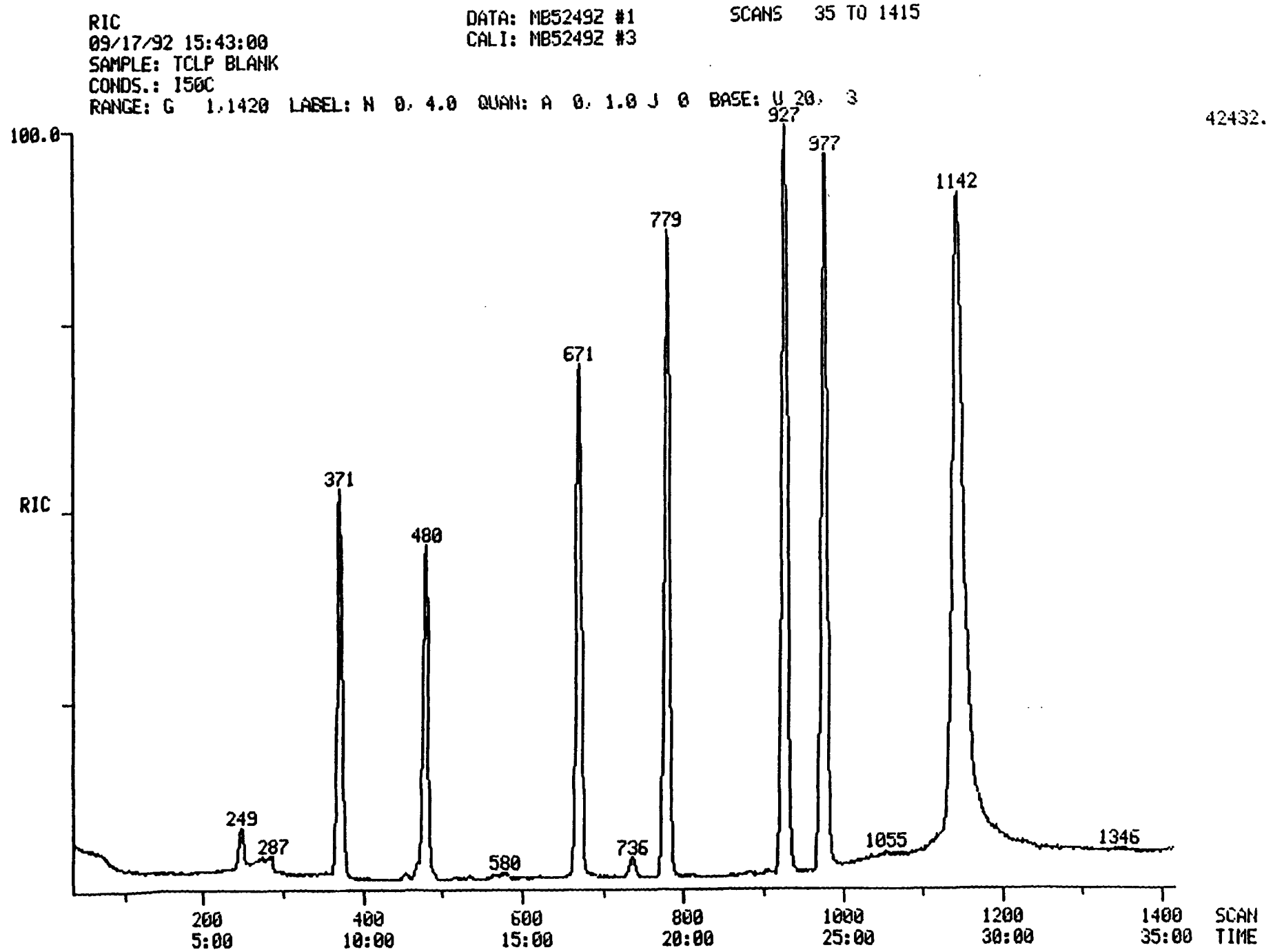
ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	MB5249Z	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	TCLP_BLANK	Percent Moisture:	100.0	Dilution Factor:	1.0

TCLP VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
75-01-4	Vinyl Chloride	10	<	79-01-6	Trichloroethene	5	<
75-35-4	1,1-Dichloroethene	5	<	71-43-2	Benzene	5	<
67-66-3	Chloroform	5	<	127-18-4	Tetrachloroethene	5	<
107-06-2	1,2-Dichloroethane	5	<	108-90-7	Chlorobenzene	5	<
78-93-3	2-Butanone	10	<				
56-23-5	Carbon Tetrachloride	5	<				

The Lab ID for data on this page is MB5249Z.
< - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.
Data not spike corrected.


RIC
09/17/92 15:43:00
SAMPLE: TCLP BLANK
CONDS.: 150C
DATA: MB5249Z #1
CALI: MB5249Z #3
SCANS 35 TO 1415
RANGE: G 1.1420 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3
42432.
100.0
RIC
249
287
371
480
580
671
736
779
927
977
1055
1142
1346
200
5:00
400
10:00
600
15:00
800
20:00
1000
25:00
1200
30:00
1400
35:00
SCAN
TIME

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ANALYTIKEM-HOU _____ Contract: _____

Lab Code: HOUSTON Case No.: A8972 SAS No.: _____ SDG No.: A8972

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	DP-1-TCLP	101	101	112	109	0
02	DP-1-TCLP-MS	100	103	112	103	0
03	DP-2-TCLP	102	100	110	106	0
04	MR-1-TCLP	96	97	113	109	0
05	TCLP_BLANK	102	98	109	109	0
06	MB091792C1	100	98	111	111	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

ORGANICS ANALYSIS DATA SHEET

Laboratory Name:	AnalytiKEM-Hou	Concentration:	LOW	Date Extracted:	09/17/92
Lab Sample ID:	A8972-1TMS	Sample Matrix:	WATER	Date Analyzed:	09/17/92
Client Sample ID:	DP-1-TCLP-MS	Percent Moisture:	100.0	Dilution Factor:	1.0

TCLP VOLATILE COMPOUNDS

CAS Number		ug/L	%R	CAS Number		ug/L	%R
75-01-4	Vinyl Chloride	43	86	79-01-6	Trichloroethene	49	98
75-35-4	1,1-Dichloroethene	43	86	71-43-2	Benzene	49	98
67-66-3	Chloroform	47	94	127-18-4	Tetrachloroethene	54	108
107-06-2	1,2-Dichloroethane	48	96	108-90-7	Chlorobenzene	50	100
78-93-3	2-Butanone	57	114				BPB
56-23-5	Carbon Tetrachloride	54	108				

The Lab ID for data on this page is A89721TVMS.
Data not spike corrected.

INITIAL CALIBRATION DATA
VOLATILE HSL COMPOUNDS

Case No: STAND Region: _____ Instrument ID: I50C
Contractor: AnalytiKEM-Hou Calibration Date: 09/15/92
Contract No: _____

Min AVE RF for SPCC is 0.300 (1) Max %RSD for CCC is 30%

Laboratory ID	IC0915020C1		IC0915100C1		IC0915200C1			
	CC091592C1		IC0915150C1					CCC*
Compound	RF(20)	RF(50)	RF(100)	RF(150)	RF(200)	AVE RF	% RSD	SPCC**
Chloromethane	1.281	1.110	0.718	0.832	0.983	0.985	22.6	* *
Bromomethane	1.232	1.036	1.054	0.835	0.781	0.988	18.4	
Vinyl Chloride	1.243	0.985	0.953	0.912	0.895	0.998	14.2	*
Chloroethane	0.766	0.636	0.633	0.572	0.593	0.640	11.8	
Methylene Chloride	1.676	1.292	1.333	1.308	1.291	1.380	12.1	
Acetone	0.470	0.531	0.140	0.136	0.120	0.279	72.7	
Carbon Disulfide	1.344	1.164	2.426	2.579	2.284	1.959	33.5	
1,1-Dichloroethene	1.717	1.420	1.363	1.365	1.259	1.425	12.2	*
1,1-Dichloroethane	4.142	3.466	3.670	3.519	3.370	3.633	8.4	* *
trans-1,2-Dichloroethene	2.030	1.636	1.649	1.544	1.458	1.663	13.2	
Chloroform	5.051	4.191	4.463	4.166	3.895	4.353	10.1	*
1,2-Dichloroethane	3.589	3.025	3.321	2.945	2.821	3.140	9.9	
2-Butanone	0.041	0.040	0.019	0.017	0.015	0.026	49.1	
1,1,1-Trichloroethane	0.781	0.761	0.670	0.660	0.598	0.694	10.9	
Carbon Tetrachloride	0.563	0.543	0.504	0.519	0.483	0.522	6.0	
Vinyl Acetate	0.071	0.041	0.129	0.120	0.087	0.090	40.2	
Bromodichloromethane	0.767	0.767	0.723	0.691	0.639	0.717	7.6	
1,2-Dichloropropane	0.488	0.433	0.454	0.417	0.403	0.439	7.6	*
cis-1,3-Dichloropropene	0.675	0.619	0.599	0.540	0.508	0.588	11.2	
Trichloroethene	0.467	0.392	0.387	0.366	0.357	0.394	11.0	
Dibromochloromethane	0.518	0.496	0.557	0.502	0.489	0.512	5.3	
1,1,2-Trichloroethane	0.389	0.311	0.363	0.313	0.300	0.335	11.5	
Benzene	1.101	0.982	0.930	0.858	0.798	0.934	12.5	
Trans-1,3-Dichloropropene	0.612	0.522	0.532	0.487	0.462	0.523	10.9	
2-Chloroethylvinyl ether	0.259	0.062	0.276	0.252	0.246	0.219	40.4	
Bromoform	0.313	0.322	0.379	0.364	0.362	0.348	8.3	* *
4-Methyl-2-Pentanone	0.437	0.351	0.521	0.526	0.511	0.469	16.0	
2-Hexanone	0.376	0.363	0.314	0.313	0.293	0.332	10.8	
Tetrachloroethene	0.466	0.392	0.340	0.353	0.330	0.376	14.7	
1,1,2,2-Tetrachloroethane	0.709	0.647	0.696	0.639	0.577	0.654	8.0	* *
Toluene	0.907	0.831	0.760	0.752	0.677	0.785	11.1	*
Chlorobenzene	1.054	0.981	0.992	0.952	0.893	0.974	6.0	* *
Ethylbenzene	0.634	0.564	0.535	0.511	0.467	0.542	11.5	*
Styrene	0.856	0.746	1.044	1.037	0.922	0.921	13.7	
Xylene (total)	0.562	0.489	0.647	0.639	0.569	0.581	11.1	
Toluene-d8	1.391	1.375	1.354	1.386	1.353	1.372	1.3	
Bromofluorobenzene	0.947	0.957	1.014	1.022	1.003	0.989	3.5	
1,2-Dichloroethane-d4	2.958	2.707	3.155	2.943	3.156	2.984	6.2	
Benzene-d6	1.043	0.998	0.979	0.941	0.937	0.980	4.5	

Response Factor (number is the amount of ug/L)
AVE RF - Average Response Factor
%RSD - - Percent Relative Standard Deviation
CCC - - Calibration Check Compounds (*)
SPCC - - System Performance Check Compounds (**)
(1) - - Minimum AVE RF for Bromoform is 0.250

TEST RESULTS BY SAMPLE

Sample: 01A A8972-1 Collected: 09/03/92
Job: RE REACTIVITY

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
REACTIVITY CYANIDE	SW-846 7.3.3	<0.40	ppm	0.40	09/14/92	JA
REACTIVITY SULFIDE	SW-846 7.3.4	245	ppm	20	09/14/92	SJ

Sample: 02A A8972-2 Collected: 09/03/92
Job: RE REACTIVITY

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
REACTIVITY CYANIDE	SW-846 7.3.3	<0.40	ppm	0.40	09/14/92	JA
REACTIVITY SULFIDE	SW-846 7.3.4	146	ppm	20	09/14/92	SJ

Sample: 03A A8972-3 Collected: 09/03/92
Job: RE REACTIVITY

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
REACTIVITY CYANIDE	SW-846 7.3.3	<0.40	ppm	0.40	09/14/92	JA
REACTIVITY SULFIDE	SW-846 7.3.4	241	ppm	20	09/14/92	SJ

SOUTHWESTERN LABORATORIES QUALITY CONTROL LOG

MDL

METHOD OF ANALYSIS 376.1 PARAMETER Sulfide MATRIX Solid - Liquid ANALYST [illegible] DATE 9/14/92 TIME [illegible]

CALIBRATION STANDARDS/BLANK	ABSORBANCE
L.R. (r) =	

STANDARDS	THEORETICAL CONCENTRATION	MEASURED CONCENTRATION	% RECOVERY
BLANK			
510	454 574	419	73%

LAB NUMBERS/SAMPLE ID NUMBERS IN THIS RUN:

92-09-131-1A, 92-09-138-1A-3A, 92-09-132 1A, 92-09-130-1A,
92-09-159-1A-4A & 92-09-099-1B

QUALITY CONTROL DUPLICATES AND SPIKES

PERCENT RECOVERY CALCULATION: SPIKED SAMPLE - SAMPLE + THEORETICAL x 100

LAB #-SAMPLE ID #	FIRST CONC.	DIL. FACTOR	REPL. CONC.	DIL. FACTOR	RANGE	%PRECISION	SPIKED SAMPLE CONC.	SAMPLE CONC.	THEO. CONC.	% RECOVERY
92-09-159-2A	153		152		1	0				

PRECISION % = FIRST CONC - REPLICATE CONC / MEAN x 100

SOUTHWESTERN LABORATORIES QUALITY CONTROL LOG

SW 846 REHN SLUDGE/ MDL

METHOD OF ANALYSIS EPA 335.3 PARAMETER CN-W MATRIX H2O ANALYST J ALLEN DATE 14 SEP 92 TIME 0800

CALIBRATION STANDARDS/BLANK	ABSORBANCE
STD 0.02	3.75
0.05	9.375
0.10	18.125
0.50	85.00
L.R. (r) = .99995	

STANDARDS	THEORETICAL CONCENTRATION	MEASURED CONCENTRATION	% RECOVERY
BLANK			
STD 0.50	.500	.5055	101
	.500	.5114	102

LAB NUMBERS/SAMPLE ID NUMBERS IN THIS RUN:

REHN 92-09-099-1 ; 92-09-118-(1,2,3) ; 92-09-137-1 ; 92-09-153-1
92-09-159-(1,2,3,4) CN-W 92-09-076-(3,4)

QUALITY CONTROL DUPLICATES AND SPIKES

PERCENT RECOVERY CALCULATION: SPIKED SAMPLE - SAMPLE ÷ THEORETICAL × 100

LAB #-SAMPLE ID #	FIRST CONC.	DIL. FACTOR	REPL. CONC.	DIL. FACTOR	RANGE	%PRECISION	SPIKED SAMPLE CONC.	SAMPLE CONC.	THEO. CONC.	% RECOVERY
92-09-159-2	<0.02	12.5 5ml / 25 ml	<0.02	12.5 5ml / 25 ml	0	—	.266	0	.252	104
92-09-159-4	<0.02	12.7 5ml / 25 ml	<0.02	12.7 5ml / 25 ml	0	—	.2671	0	.250	105

PRECISION % = FIRST CONC. - REPLICATE CONC. ÷ MEAN × 100

ANALYTIKEM – HOUSTON

SILVER QUALITY CONTROL LOG

EPA SW-846:7760, AA

DATE/TIME OF ANALYSIS: 21Sep92/1350 PAGE 1 OF 2

LAB NUMBER-SAMPLE	COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A9007(12)	Method blank for A8931 1T	SAMPLE BLANK	
A8931-(1-5)		METHOD BLANK	
A9027-(1-6)	A9027 was <2 mg/kg.	ERA 2 PE STD	1.012/1.0
A9007A-LT		INTERNAL STD.	
A8972-(1T-3T)			
A9021-1			

MATRIX SPIKE PRECISION		MS DUPLICATE		ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A9007-MB	107	–	–	0.1	0.107	107	–	–
A9007-2	112	106	5.5	0.1	0.112	112	0.106	106
(S) A8931-MB	115	–	–	↓	0.115	115	–	–
A8931-1	107	90	17.2	↓	0.107	107	0.090	90
A9027-MB	86	–	–	0.2	0.172	86	–	–
A9027-6	88	90	2.2	↓	0.176	88	0.179	90
A9007A-MB	88	–	–	0.1	0.088	88	–	–
A9007A-Extract Blk	82	↓	↓	↓	0.082	82	↓	↓
A9007A-6T	72				0.072	72		
A8972-MB	72				0.072	72		
-Extract Blk	84				0.084	84		
-1T	85				0.085	85		
-2T	87	↓	↓	↓	0.087	87	↓	↓

CONTROL LIMITS: AQUEOUS, 9–12 %RPD, 78–116 %REC.

SOLIDS, SAME %RPD, SAME %REC.

1 OUT OF 3 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 16 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: Erica M Edwards/ENE QA/QC: Joann Ward

ANALYTIKEM – HOUSTON

SILVER QUALITY CONTROL LOG

EPA SW-846:7760, AA

DATE/TIME OF ANALYSIS: 21Sep92/1350 PAGE 2 OF 2

LAB NUMBER-SAMPLE	COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
		SAMPLE BLANK	
		METHOD BLANK	
		P.E. STD.	
		INTERNAL STD.	

MATRIX SPIKE / LAB NUMBER-SAMPLE	PRECISION MS % REC.	MS DUPLICATE MSD % REC.	% RPD	ACCURACY SPIKE AMOUNT	MS RESULT	MS % REC.	MSD RESULT	MSD % REC.
A8972-3T	86	–	–	0.1	0.086	86	–	–
A9021-mB	88	↓	↓	↓	0.088	88	↓	↓
A9021-1	87	91	4.5	↓	0.087	87	0.091	91

CONTROL LIMITS: AQUEOUS, 9-12 %RPD, 78-116 %REC.

SOLIDS, SAME %RPD, SAME %REC.

0 OUT OF 1 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 4 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: [signature] QA/QC: [signature]

ANALYTIKEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 24 SEPT92/0853 EPA SW-846:6010 PAGE 1 OF 3

LAB ID	A8972-(1T→3T)	A9021-1	A9041-(1→10) Ds	A9041-(1→10) TTL	A9062-1,3,5,6		
NOs							

PARAMETER		As	Se	Zn	Pb	Cd	Ni	Cr	Be	Cu	Ba
PE	ERA-3	1.08 / 1.00	9.08 / 10.0	0.984 / 1.00	0.983 / 1.00	1.01 / 1.00	0.994 / 1.00	0.998 / 1.00	1.00 / 1.00	1.00 / 1.00	1.00 / 1.00
STDS											

A8972-MB MS/MSD %REC	106	98	108	107	100				104	
%RPD										
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2				2.0	
A8972-EB MS/MSD %REC	102	99	97	99	97				116	
%RPD										
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2				2.0	
A8972-1T MS/MSD %REC	96	97	76	100	93				78	
%RPD										
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2				2.0	
A8972-2T MS/MSD %REC	111	96	77	80	78				80	
%RPD										
SPIKE AMT.	2.0	2.0	1.0	0.1	0.2				2.0	

CONTROL LIMITS:

AQUEOUS	%RPD.												
	%REC.												
SOLIDS	%RPD.												
	%REC.												

-0- OUT OF -0- DUPLICATES WERE OUTSIDE OF QC LIMITS
0 OUT OF 24 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: _____

ANALYST: James Matthews/JM QA/QC: Ted McKinney/TM

ANALYTICHEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 24SEPT92/0853 EPA SW-846:6010 PAGE 2 OF 3

	As	Se	Zn	Pb	Cd	Ni	Cr	Be	Cu	Ba	
A8972-3T MS/MSD %REC	112	112		82	78		70			62	
%RPD											
SPIKE AMT.	2.0	2.0		1.0	0.1		0.2			2.0	
A9021-MB MS/MSD %REC			88	88	90	88	86		99		
%RPD											
SPIKE AMT.			1.0	1.0	0.1	1.0	0.2		0.2		
A9021-1 MS/MSD %REC			88/86	93/92	88/86	91/90	88/89		92/91		
%RPD			2.30	1.08	2.30	1.10	1.13		1.09		
SPIKE AMT.			1.0	1.0	0.1	1.0	0.2		0.2		
A9041-MB MS/MSD %REC Diss			93	93	92	94	91		104	94	
%RPD											
SPIKE AMT.			1.0	1.0	0.1	1.0	0.2		0.2	2.0	
A9041-3 MS/MSD %REC Diss			77/88	79/83	65/72	84/88	84/89		*/*	85/85	
%RPD			13.33	4.94	10.22	4.65	5.78		2.43	0	
SPIKE AMT.			1.0	1.0	0.1	1.0	0.2		0.2	2.0	
A9041-MB MS/MSD %REC Total			89	91	87	88	120		104	94	
%RPD											
SPIKE AMT.			1.0	1.0	0.1	1.0	0.2		0.2	2.0	

CONTROL LIMITS:

AQUEOUS	%RPD											
	%REC.											
SOLIDS	%RPD											
	%REC.											

0 OUT OF 13 DUPLICATES WERE OUTSIDE OF QC LIMITS
2 OUT OF 52 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: _____

ANALYST: Laura Mathis/SM QA/QC: Ted R McKelvey/TM

ANALYTEXEM - HOUSTON
ICAP QUALITY CONTROL LOG

DATE/TIME: 24 SEPT 92/0853 EPA SW-846:6010 PAGE 3 OF 3

	Zn	Pb	Cd	Ni	Cr	Be	Cu	Ba			
A9041-10 MS/MSD %REC TOTAL	84/77	88/84	87/95	89/88	*/*		92/92	81/82			
%RPD	8.70	4.65	8.79	1.13	0.66		0	1.23			
SPIKE AMT.	1.0	1.0	0.1	1.0	0.2		0.2	2.0			
A9062-MB MS/MSD %REC		86			88		82				
%RPD											
SPIKE AMT.		1.0			0.2		0.2				
A9062-1 MS/MSD %REC		81/81			66/71		72/74				
%RPD		0			7.30		2.74				
SPIKE AMT.		1.0			0.2		0.2				
MS/MSD %REC											
%RPD											
SPIKE AMT.											
MS/MSD %REC											
%RPD											
SPIKE AMT.											
MS/MSD %REC											
%RPD											
SPIKE AMT.											

CONTROL LIMITS:

AQUEOUS	%RPD											
	%REC.											
SOLIDS	%RPD											
	%REC.											

0/2 OUT OF 10/23 DUPLICATES WERE OUTSIDE OF QC LIMITS
2/23 OUT OF 23 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

COMMENTS: * spike lost to high analyte concentration

ANALYST: James Matthews/SM QA/QC: Ted R McKelvey ITM

AnalytiKEM–Houston

QUALITY CONTROL LOG

Parameter: Ignitability on Solid

Method of Analysis: EPA SW-846, 1010

Page: 1 of 1

Matrix: Soil

Date/Time: 9-16-92 / 1740

Lab Numbers	Detection Limits
A9007-6	
A8972-1,2,3	

Calibration Stds./Blk	Absorbance/Conc.
Correlation Coefficient:	

Comments: ** Samples analyzed in duplicate

Check Standards	Concentration Found/True
Sample Blank	[illegible]
Method Blank	[illegible]
P.E. Std.	[illegible]
Internal Std.	[illegible]

Internal Quality Control Duplicates and Spikes

* Below MDL

Lab No. – Sample ID	Sample Conc.	Duplicate Conc.	Range	Percent RPD	Spiked Result	Sample Result	Spike Added	Percent Recovery
**A9007-6								
**A8972-1								

Analyst: [signature]

QA/QC Approval: [signature]

ANALYTIKEM - HOUSTON

MERCURY QUALITY CONTROL LOG

EPA SW-846:7470, 7471 AA

DATE/TIME OF ANALYSIS: 9/22/92/16:00 PAGE 1 OF 1

LAB NUMBER-SAMPLE		COMMENTS	CHECK STANDARDS	CONCENTRATION FOUND/TRUE
A8972-1T-3T			SAMPLE BLANK	—
A9007A-6T			METHOD BLANK	—
A9027-1-6			EPA 1085-1 P.E. STD.	0.0105/0.010
A9003-1			CVS ~~INTERNAL~~ STD.	0.0095/0.0075

MATRIX SPIKE	PRECISION		MS DUPLICATE	ACCURACY				
LAB NUMBER-SAMPLE	MS % REC.	MSD % REC.	% RPD	SPIKE AMOUNT	MS RESULT	% REC.	MSD RESULT	% REC.
A8972-extract blk	106	—	—	0.005	0.0053	106	—	—
A8972-1T	98	—	—		0.0049	98	—	—
A8972-2T	102	—	—		0.0051	102	—	—
A8972-3T	98	—	—		0.0049	98	—	—
A9007A-extract blk	98	—	—		0.0049	98	—	—
A9007A-6T	100	—	—		0.0050	100	—	—
S A9027-4	98	98	0		0.0049	98	0.0049	98
A9003-1	90	90	0		0.0045	90	0.0045	90
METHOD BLANK	102	—	—		0.0051	102	—	—

CONTROL LIMITS: AQUEOUS, 11-15 %RPD, 81-123 %REC

SOLIDS, SAME %RPD, SAME %REC

0 OUT OF 2 DUPLICATES WERE OUTSIDE OF QC LIMITS

0 OUT OF 10 SPIKE RECOVERIES WERE OUTSIDE OF QC LIMITS

ANALYST: Tammy Lonon/CL QA/QC: Ted R McKinney/TM

AnalytiKEM LABORATORIES - HOUSTON
QUALITY CONTROL LOG- MATRIX SPIKE RECOVERY AND PRECISON
SW-846: METHOD 8 A8972
MATRIX: SOIL SAMPL A8972-1

COMPOU	SPIKE ADDED	SAMPLE RESULT	MS RESULT	REC%	MSD RESULT	REC%	RPD	QC LIMITS RPD	QC LIMITS REC%
DIESEL	250	34	299	106	446	165	39	20.00	20-150

Wanda Metz 9/30/92 Brenda P. Basile 9/30/92

ANALYST DATE QA/QC APPROVAL DATE

ANALYTIKEM LABORATORIES
QUALITY CONTROL LOG-FORTIFIED BLANK AND METHOD BLANK
TPH ANALYSIS
LAB NO. A8972

BLANK EXTRACTION DATE: 9/15/92

NO TPH DETECTED AT STATED METHOD DETECTION LIMIT MB5243LS

FORTIFIED METHOD BLANK FB5244LS

AMOUNT(MG/KG) SPIKED	AMOUNT(MG/KG) RECOVERED	PERCENT RECOVERY
250	290	116

COMMENTS:

Sanda Wilson 9/28/92
ANALYST SIGNATURE DATE

Brenda P. Basile 9/29/92
QAQC COORDINATOR DATE

AnalytiKEM–Houston

QUALITY CONTROL LOG

Parameter: pH correction on Solid

Method of Analysis: EPA SW-846, 9040

Page: 1 of 1

Matrix: ~~Liquid~~ Solid AB

Date/Time: 9-16-92/1620

Lab Numbers	Detection Limits
A8972-123	0.01 unit
A9007-6	↓

Calibration Stds./Blk	Absorbance/Conc.
Buffer 10.00 } Calib.	
4.00 }	
Correlation Coefficient:	

Comments:

Check Standards	Concentration Found/True
Sample Blank	[illegible]
Method Blank	[illegible]
P.E. Std.	[illegible]
Internal Std. ~~Buffer~~ 7.0	7.04 units
cc/s Buffer 7.0	7.05 units.

Internal Quality Control Duplicates and Spikes

* Below MDL

Lab No. – Sample ID	Sample Conc.	Duplicate Conc.	Range	Percent RPD	Spiked Result	Sample Result	Spike Added	Percent Recovery
A8972-1	8.57	8.58	0.01	0.1				
A9007-6	7.39	7.32	0.07	1.0				

AnalytiKEM-Houston

Billing Summary
10/02/92 14:22

EXXON
Project No.: 1009-001-150 **Lab Number: A8972**

	Test Code	Description	Number	Cost	Total
1.	Ag - -TCL-HOU	TCLP SILVER	3	15.62	46.86
2.	As - -TCI-HOU	TCLP ARSENIC	3	15.62	46.86
3.	BNA - - -HOU	SEMIVOLATILE ORGANICS	3	450.00	1350.00
4.	Ba - -TCL-HOU	TCLP BARIUM	3	15.62	46.86
5.	CORR -S- -HOU	CORROSIVITY ON SOLID	3	65.00	195.00
		No Charge-Unable to Analyze	3	-65.00	-195.00
6.	Cd - -TCL-HOU	TCLP CADMIUM	3	15.62	46.86
7.	Cr - -TCL-HOU	TCLP CHROMIUM	3	15.63	46.89
8.	FP -S- -HOU	IGNITABILITY ON SOLID	3	35.00	105.00
9.	H2S -S-REA-SWL	HYDROGEN SULFIDE, REACTIVE/SLD	3	35.00	105.00
10.	HCN -S-REA-SWL	HYDROCYANIC ACID, REACTIVE/SLD	3	35.00	105.00
11.	Hg - -TCL-HOU	TCLP MERCURY	3	15.63	46.89
12.	Pb - -TCL-HOU	TCLP LEAD	3	15.63	46.89
13.	Se - -TCI-HOU	TCLP SELENIUM	3	15.63	46.89
14.	TCLP -S- -HOU	TOXICITY CHAR. LEACH. PROC.	3	100.00	300.00
15.	TPH -S-GC -HOU	PETROLEUM HYDROCARBON BY GC	3	100.00	300.00
16.	VOA - - -HOU	VOLATILE ORGANIC ANALYSES	3	225.00	675.00
17.	ZHE -S- -HOU	ZERO HEADSPACE EXTRACTION/SLD	3	150.00	450.00
18.	pH -S-COR-HOU	pH CORROSION ON SOLID	3	10.00	30.00
19.		Sample Disposal Charge		$ 6.50	32.50
	Total:				3827.50

ENSR

November 18, 1992

ENSR Consulting
and Engineering
3000 Richmond Avenue
Houston, Texas 77098
(713) 520-9900
(713) 520-6802 (FAX)

Mr. Roger C. Anderson
Bureau Chief
Environmental Bureau
Oil Conservation Division
Land Office Building, State of New Mexico
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Waste Classification of Contaminated Soils from the former Exxon Chemical Company Facility at 2607/2609 West Marland Boulevard and Exxon Chemical Company Facility at 1715 Dal Paso, Hobbs, New Mexico

Dear Mr. Anderson:

As discussed in our meeting on July 31, 1992 you requested that a waste classification of the contaminated soils be made prior to submittal of a work plan to the OCD for a removal action. ENSR collected samples from both sites on September 3, 1992 in the areas of concern, as discussed in our meeting. Therefore, the purpose of this letter is to notify the New Mexico Oil Conservation Division (OCD) that contaminated soils from the Exxon Chemical facilities, referenced above, should be classified as non-hazardous for disposal purposes based on the attached analytical data.

Samples, DP-1 from the Dal Paso site and MR-1 from the Marland site, were collected from trenches through areas of known hydrocarbon and/or lead soil contamination. These contaminated areas had been identified through previous sampling conducted by ENSR in January 1992. Sample DP-2 was collected from the Dal Paso site in a trench at the base of the collapsed septic tank, as you requested. The soil surrounding the septic tank was suspected to have contained oily wastes prior to its being taken out of service in 1984. As shown by the attached analytical data, as well as past analytical data, the soils from the septic tank area do not appear to be contaminated with metals or hydrocarbons and therefore will not be addressed in the work plan for a removal action.

All three samples were collected as composite samples, as requested. Each was composited from at least five sample points within the known or suspected contaminated soil areas.

We expect to submit work plans to your offices by December 23, 1992 for your approval. After obtaining OCD approval ENSR expects to begin field work within 30 days, weather permitting.

ENSR is currently considering disposal of the contaminated soils at the CRI landfill near Hobbs. ENSR will request OCD authorization for disposal when the work plan is submitted.

If you have any questions or comments please contact me at (713) 520-9900.

Sincerely,

J. Scott Kuykendall
Staff Geologist

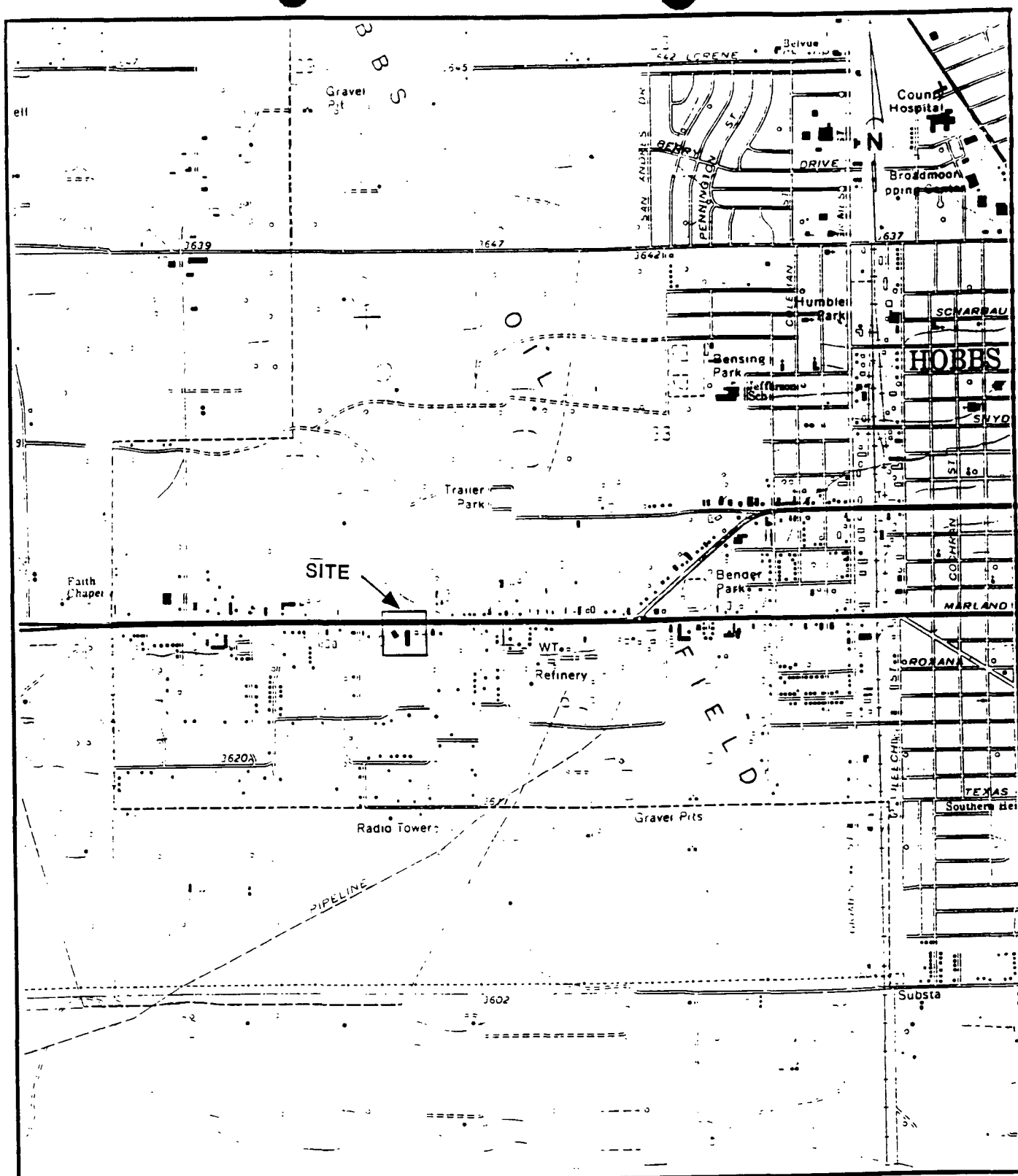
Jay Swindle
Project Manager

JSK:JS/db

Attachments

Reference No. 1009-001-150

cc: Brown McCarroll and Oaks Hartline



0 2000 4000

SCALE IN FEET

REFERENCE: U.S.G.S. Quadrangle Map for Hobbs West, New Mexico 1979

TOPO

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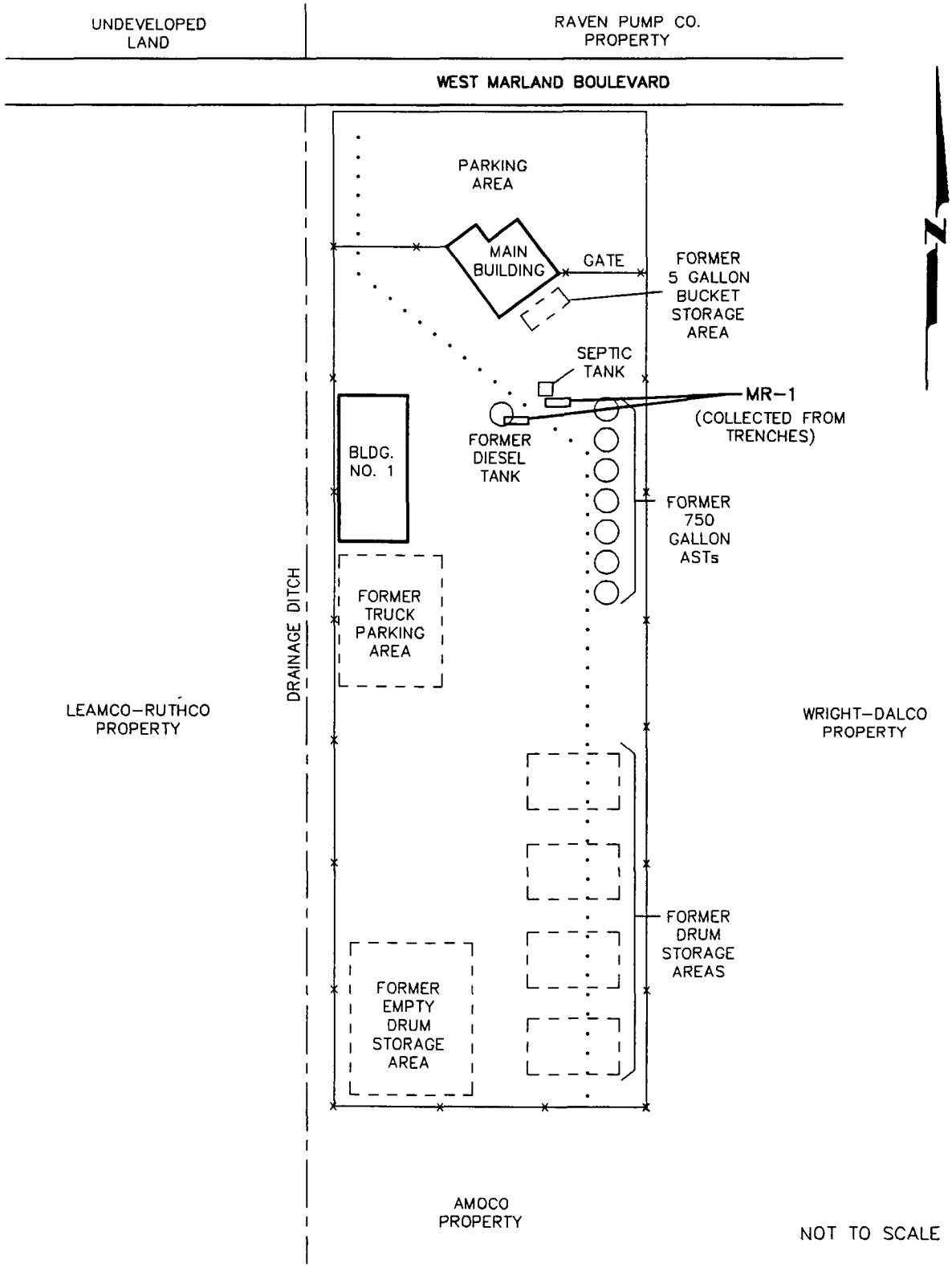
ENSR CONSULTING AND ENGINEERING

SITE LOCATION MAP

2607, 2609 WEST MARLAND BLVD.

HOBBS, NEW MEXICO

DRAWN BY: S. GHANI	DATE: 10-16-92	PROJECT NUMBER: 1009-001-150
CHK'D.BY:	REVISED:	



LEGEND

- EXISTING STRUCTURE
- FENCE
- GAS PIPELINE

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SITE PLOT PLAN WITH SAMPLE LOCATIONS 2607, 2609 WEST MARLAND BLVD. HOBBS, NEW MEXICO

DRAWN: LG/SF	DATE: 11-12-92	PROJECT NUMBER:	
APPV'D:	REVISED:	1009-001-150	

CE100907

Summary of Analytical Results
Former Exxon Chemical Company Facility
2607/2609 West Marland Facility
Hobbs, New Mexico
Date Sampled: 9-3-92

Analytical Parameters	Regulatory Threshold Limit	Sample ID: MR-1 Depth: 0'-3'	
TCLP Metals (mg/l)		**Level Detected**	**Detection Limit**
Arsenic	5.0	<0.2	0.2
Barium	100.0	1.2	0.5
Cadmium	1.0	<0.010	0.010
Chromium	5.0	<0.05	0.05
Lead	5.0	<0.02	0.02
Mercury	0.2	<0.001	0.001
Selenium	1.0	<0.2	0.2
Silver	5.0	<0.01	0.01
TCLP Volatiles (μg/l)			
Pyridine	5,000	<11	11
Vinyl Chloride	200	<10	10
1,1-Dichloroethene	700	<5	5
Chloroform	6,000	<5	5
1,2-Dichloroethane	500	<5	5
Methyl Ethyl Ketone	200,000	<10	10
Carbon Tetrachloride	500	<5	5
Trichloroethene	500	<5	5
Benzene	500	<5	5
Tetrachloroethene	700	<5	5
Chlorobenzene	100,000	<5	5
TCLP Semivolatiles (μg/l)		**Level Detected**	**Detection Limit**
1,4-Dichlorobenzene	7,500	<11	11
2-Methylphenol	200,000	<11	11
4-Methylphenol	200,000	<11	11
3-Methylphenol	200,000	<11	11

Summary of Analytical Results
Former Exxon Chemical Company Facility
2607/2609 West Marland Facility
Hobbs, New Mexico
Date Sampled: 9-3-92

Analytical Parameters	Regulatory Threshold Limit	Sample ID: MR-1 Depth: 0'-3'	
Hexachloroethane	3,000	<11	11
Nitrobenzene	2,000	<11	11
Hexachlorobuta-diene	500	<11	11
2,4,6-Trichlorophenol	2,000	<11	11
2,4,5-Trichlorophenol	400,000	<54	54
2,4-Dinitrotoluene	130	<11	11
Hexachlorobenzene	130	<11	11
Pentachlorophenol	100,000	<54	54
RCRA Characteristics			
pH	2<pH<12.5	8.06 units	0.01 units
Corrosivity	>6.35 MMPY	Unable to analyze due to matrix	Unable to analyze due to matrix
Ignitability	<140°F	Unable to analyze due to matrix	Unable to analyze due to matrix
Reactivity - HCN - H_2S	 250 mg/kg 500 mg/kg	 <0.40 mg/kg 241 mg/kg	 0.40 mg/kg 20 mg/kg

B - Below Method Detection Limit

BROWN McCARROLL & OAKS HARTLINE

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Fax (713) 529-4639

November 12, 1992

Writer's Direct Number:
(512) 479-9752

Mr. Carl Baldwin
County Commissioner
Lee County Courthouse
Lovington, New Mexico 88240

VIA FEDERAL EXPRESS

Re: Cleanup of Facilities Owned or Formerly Operated by Exxon Corporation

Dear Mr. Baldwin:

As we discussed on Tuesday, November 10, 1992, Exxon Chemical Company, a division of Exxon Corporation, (Exxon) is working with the New Mexico Oil Conservation Division (OCD) to conduct a cleanup of two properties that were owned or operated by Exxon in the City of Hobbs. The purpose of this letter is to (1) briefly review the history of the sites; (2) briefly describe the proposed cleanup plan; and (3) advise you of an opportunity to review and comment on the proposed plans.

The first property is located at 1715 Dal Paso Street in the City of Hobbs (see enclosed maps). Exxon acquired the property in 1987 from NL Industries, Inc. (NLI). The property is currently used as office space only. When Exxon first acquired the property in 1987, it used the facility to store and distribute oil field chemicals. NLI also used the property for storing and distributing oil field chemicals. Dry chemicals were stored inside the buildings on the site; liquid chemicals were stored in above-ground tanks and drums in the yard area. The chemicals were used for the maintenance of oil wells and included paraffin solvents, corrosion inhibitors, scale inhibitors, emulsion breakers, desalting compounds, microbiocides, surfactants, defoamers, and water clarifiers. Soils at the facility became contaminated as a result of periodic product spills and leaks over many years of facility usage.

The second property is located at 2607/2609 West Marland Street in the City of Hobbs (see enclosed maps). It is currently owned by Electro-Support Systems, Inc. Exxon acquired the lease to the property from NLI in 1987 and terminated the lease in 1989. During the period of Exxon's operations, the facility was used for the storage and distribution of oil field chemicals similar to those described above. The products were

stored in above-ground tanks and drums in the yard area. Soils at this site are also contaminated with constituents from the oil field products.

As required by the laws of the State of New Mexico, Exxon notified the OCD regarding the contaminated soils at the properties and have been working with that agency to develop appropriate cleanup plans. Toward that end, Exxon has prepared an Engineering Evaluation/Cost Analysis, which discusses several cleanup alternatives. A copy of the Engineering Evaluation/Cost Analysis for each site is enclosed. To allow public participation in the remedy selection process, Exxon intends to publish a notice in the Hobbs News Sun on November 16, 1992. Exxon hereby invites the County to review these documents and to call me or Mr. J. Paul Reed, Exxon's Environmental Coordinator, at (713) 671-8676 for more information.

Very truly yours,

Patricia E. Carls

Patricia E. Carls

I:\PS\CARLST\140995.1
13232.68180

Enclosures

cc: (via Federal Express)
R. Anderson, OCD
R. Littleton, County Commissioner
B. Goff, County Commissioner
M. Hughes, County Commissioner
I. Azisky, County Commissioner
S. Vincent, County Commissioner

BROWN McCARROLL & OAKS HARTLINE

Attorneys

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Fax (713) 529-4639

November 12, 1992

Writer's Direct Number:
(512) 479-9752

VIA FEDERAL EXPRESS

Mr. Robert Love
Mayor
City of Hobbs
City Hall
300 North Turner
Hobbs, New Mexico 88240

Re: Cleanup of Facilities Owned or Formerly Operated by Exxon Corporation

Dear Mr. Love:

As we discussed on Tuesday, November 10, 1992, Exxon Chemical Company, a division of Exxon Corporation, (Exxon) is working with the New Mexico Oil Conservation Division (OCD) to conduct a cleanup of two properties that were owned or operated by Exxon in the City of Hobbs. The purpose of this letter is to (1) briefly review the history of the sites; (2) briefly describe the proposed cleanup plan; and (3) advise you of an opportunity to review and comment on the proposed plans.

The first property is located at 1715 Dal Paso Street in the City of Hobbs (see enclosed maps). Exxon acquired the property in 1987 from NL Industries, Inc. (NLI). The property is currently used as office space only. When Exxon first acquired the property in 1987, it used the facility to store and distribute oil field chemicals. NLI also used the property for storing and distributing oil field chemicals. Dry chemicals were stored inside the buildings on the site; liquid chemicals were stored in above-ground tanks and drums in the yard area. The chemicals were used for the maintenance of oil wells and included paraffin solvents, corrosion inhibitors, scale inhibitors, emulsion breakers, desalting compounds, microbiocides, surfactants, defoamers, and water clarifiers. Soils at the facility became contaminated as a result of periodic product spills and leaks over many years of facility usage.

The second property is located at 2607/2609 West Marland Street in the City of Hobbs (see enclosed maps). It is currently owned by Electro-Support Systems, Inc. Exxon acquired the lease to the property from NLI in 1987 and terminated the lease in 1989. During the period of Exxon's operations, the facility was used for the storage and

distribution of oil field chemicals similar to those described above. The products were stored in above-ground tanks and drums in the yard area. Soils at this site are also contaminated with constituents from the oil field products.

As required by the laws of the State of New Mexico, Exxon notified the OCD regarding the contaminated soils at the properties and have been working with that agency to develop appropriate cleanup plans. Toward that end, Exxon has prepared an Engineering Evaluation/Cost Analysis, which discusses several cleanup alternatives. A copy of the Engineering Evaluation/Cost Analysis for each site is enclosed. To allow public participation in the remedy selection process, Exxon intends to publish a notice in the Hobbs News Sun on November 16, 1992. Exxon hereby invites the City to review these documents and to call me or Mr. J. Paul Reed, Exxon's Environmental Coordinator, at (713) 671-8676 for more information.

Very truly yours,

Patricia E. Carls

Patricia E. Carls

I:\PS\CARLST\140966.1
13232.68180

Enclosures

cc: (via Federal Express)
R. Gallagher, City Manager
R. Doss, City Engineer
M. Gray, Fire Chief
R. Anderson, OCD

BROWN McCARROLL & OAKS HARTLINE

Attorneys

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Fax (713) 529-4639

November 12, 1992

Writer's Direct Number:
(512) 479-9752

VIA FEDERAL EXPRESS

Ms. Cris Adams
Hobbs Public Library
509 North Shipp
Hobbs, New Mexico 88240

Re: Exxon Chemical Company; Public Document Repository

Dear Ms. Adams:

As we discussed last week, I am the attorney for Exxon Chemical Company, a division of Exxon Corporation (Exxon), on an environmental matter involving property located in the City of Hobbs. Federal law requires Exxon to make certain documents available for public review for a period of thirty days. Accordingly, I am enclosing one copy of each of the following documents: Engineering Evaluation/Cost Analysis (Dal Paso Street); Engineering Evaluation/Cost Analysis (West Marland Street).

These documents must be made available for public review from November 16, 1992 through December 16, 1992. I understand that you and your staff can accommodate Exxon's needs by making the documents available at the Reference Desk.

Thank you for your cooperation and assistance in this matter. Please feel free to call me collect if you have any questions or need additional information.

Very truly yours,

Patricia E. Carls

Patricia E. Carls

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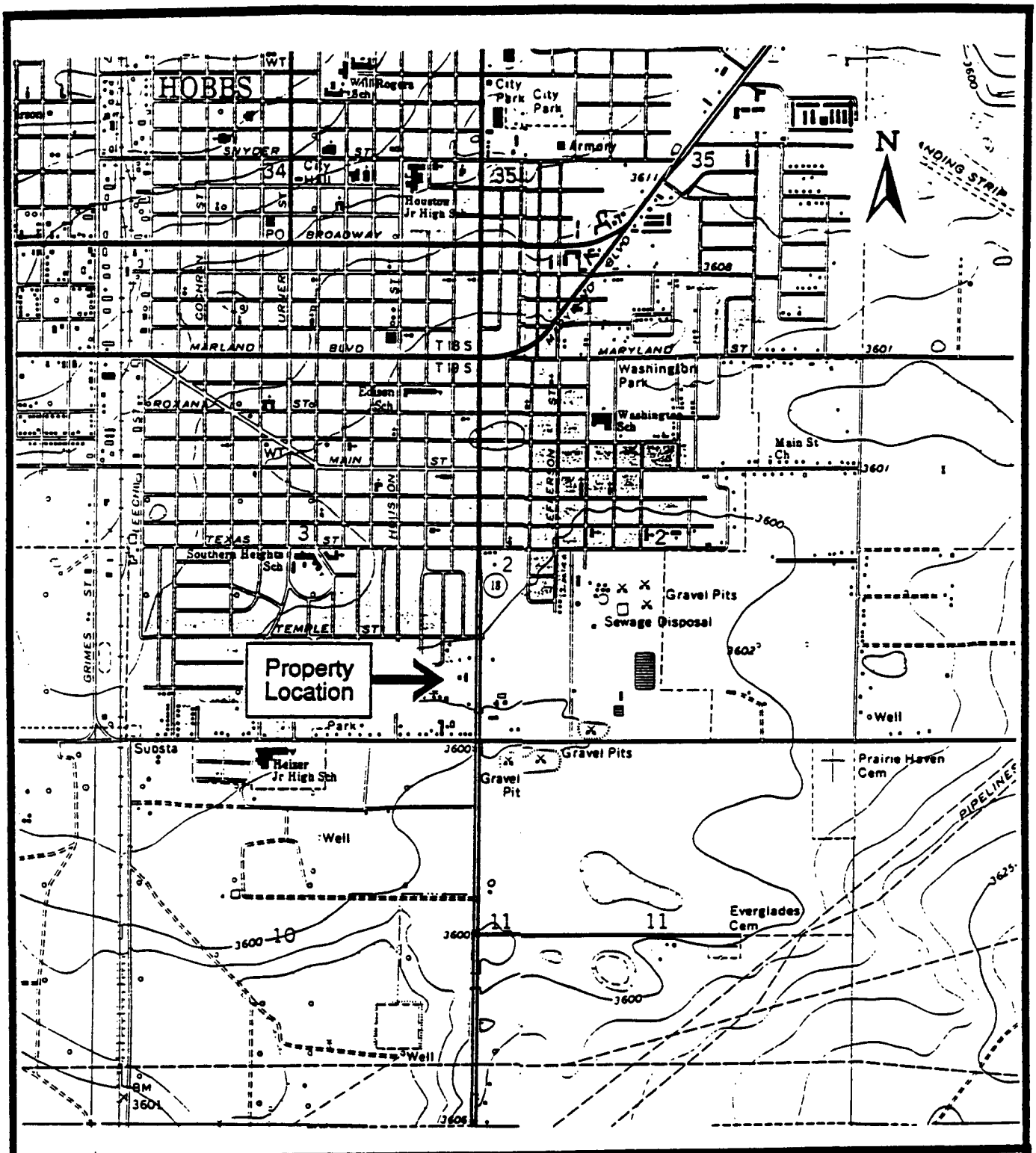
13232.68180

Enclosure

cc: R. Anderson, OCD (via Federal Express)



Source: USGS, Hobbs, West, N. Mex. quadrangle, 1969. Photo Revised 1979.

QUADRANGLE LOCATION

Scale

0 1Mile

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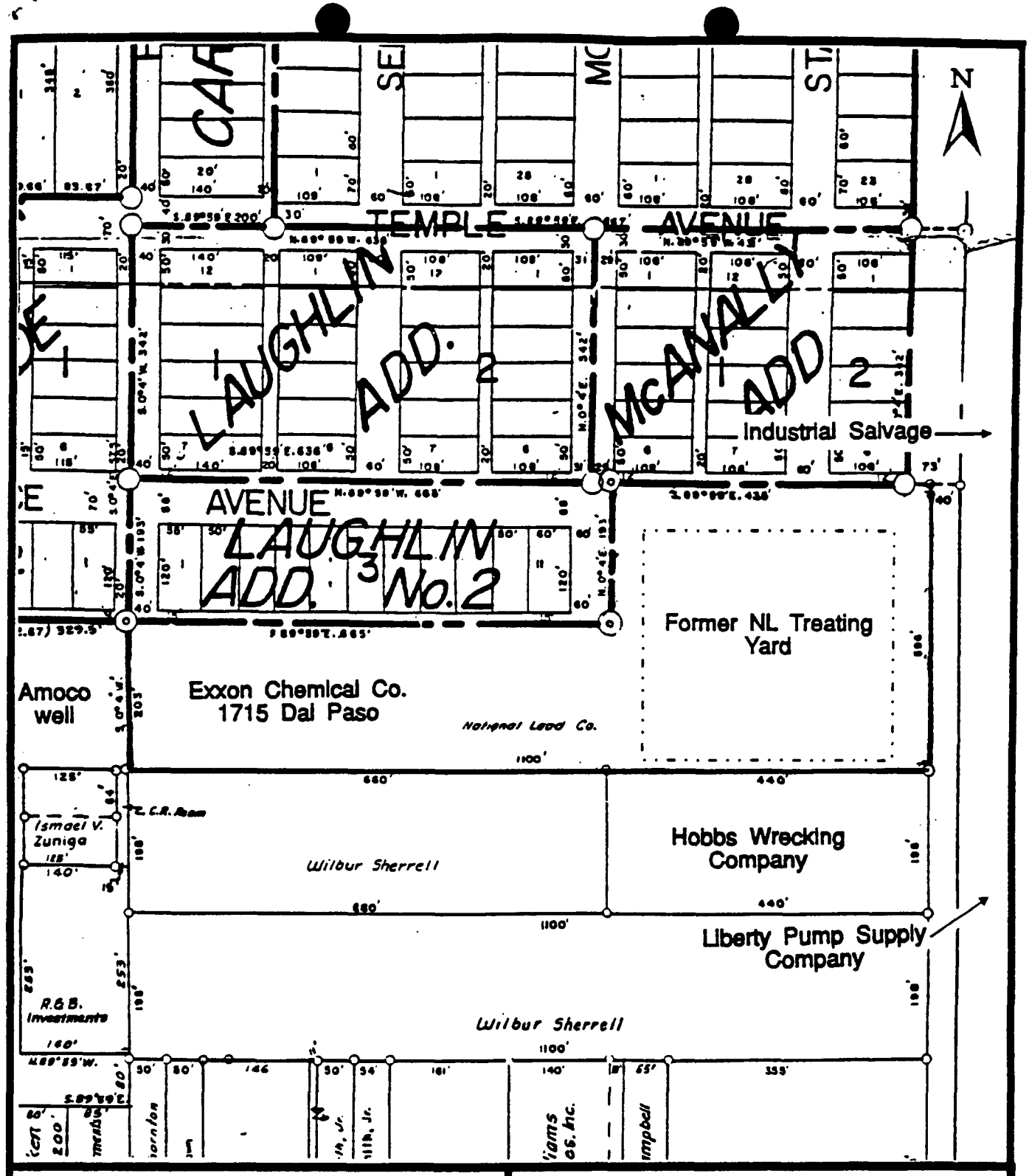
Consulting and Engineering

Figure 1
Property Location
1715 Dal Paso
Hobbs, NM

DRAWN: RBG	DATE: 9-5-91	PRJ. NO.: 2620-092-517



Source: Commercial Appraisal Report for Exxon Company, U.S.A. May 9, 1989.

Scale: 1 inch = 200 feet

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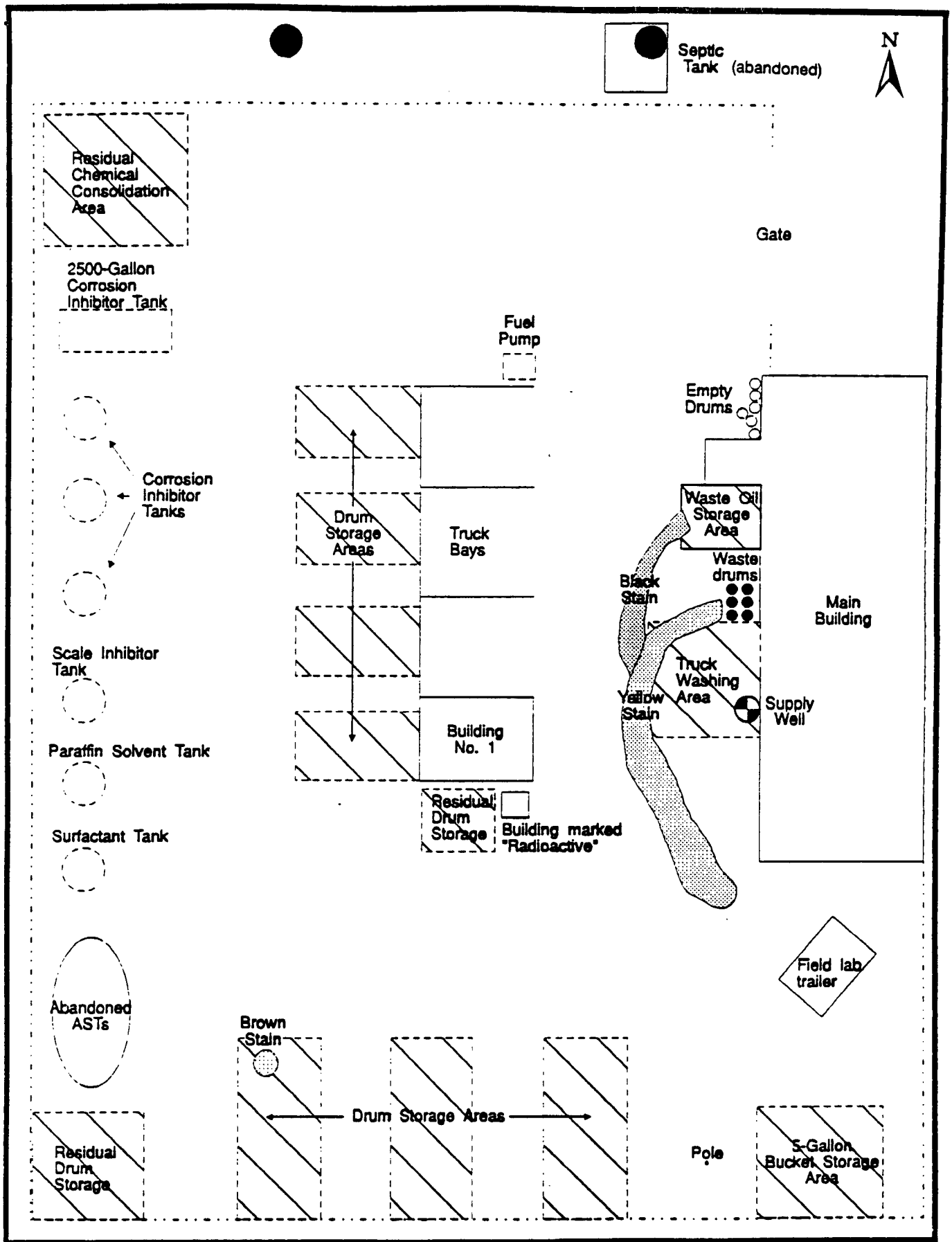
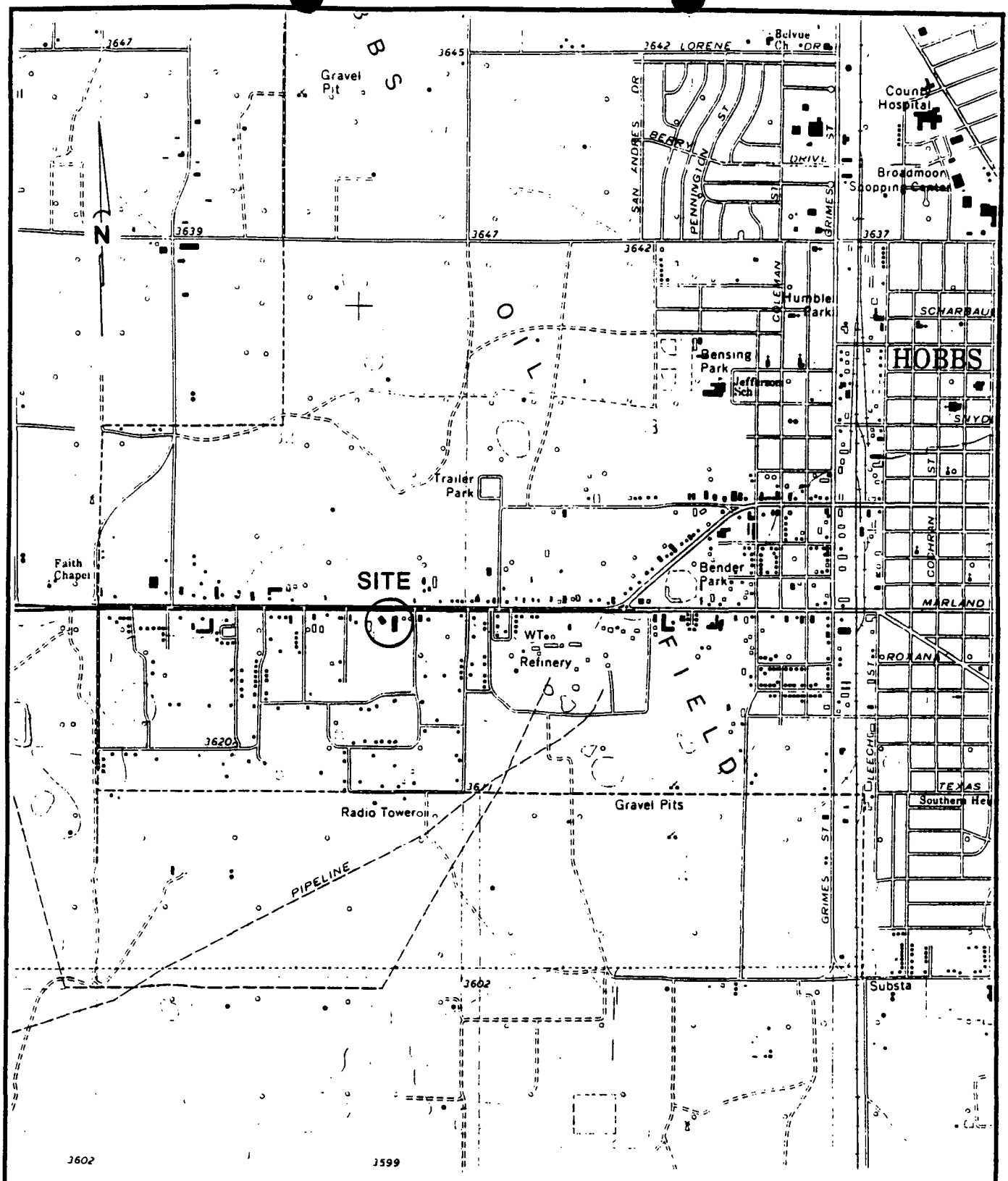
Consulting and Engineering

Figure 2
Property Boundaries
1715 Dal Paso, Hobbs, NM

DRAWN: BBG	DATE: 9-5-91	PRJ. NO.: 2620-092-517


Septic Tank (abandoned)
N
Residual Chemical Consolidation Area
Gate
2500-Gallon Corrosion Inhibitor Tank
Fuel Pump
Empty Drums
Corrosion Inhibitor Tanks
Drum Storage Areas
Truck Bays
Waste Oil Storage Area
Waste drums
Black Stain
Main Building
Scale Inhibitor Tank
Truck Washing Area
Yellow Stain
Supply Well
Paraffin Solvent Tank
Building No. 1
Residual Drum Storage
Building marked "Radioactive"
Surfactant Tank
Field lab trailer
Abandoned ASTs
Brown Stain
Drum Storage Areas
Residual Drum Storage
Pole
5-Gallon Bucket Storage Area
Fence
Existing structure
Approximate location of structure
Approximate area location
NOT TO SCALE
ENSR Consulting and Engineering
Figure 3
Property Details
1715 Dal Paso, Hobbs, New Mexico
DRAWN: SB
DATE: 6-7-91
PRJ. NO.: 2420-002-517



Ref.: USGS, Hobbs West, New Mexico Quadrangle Map, 1979

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FIGURE 2-1

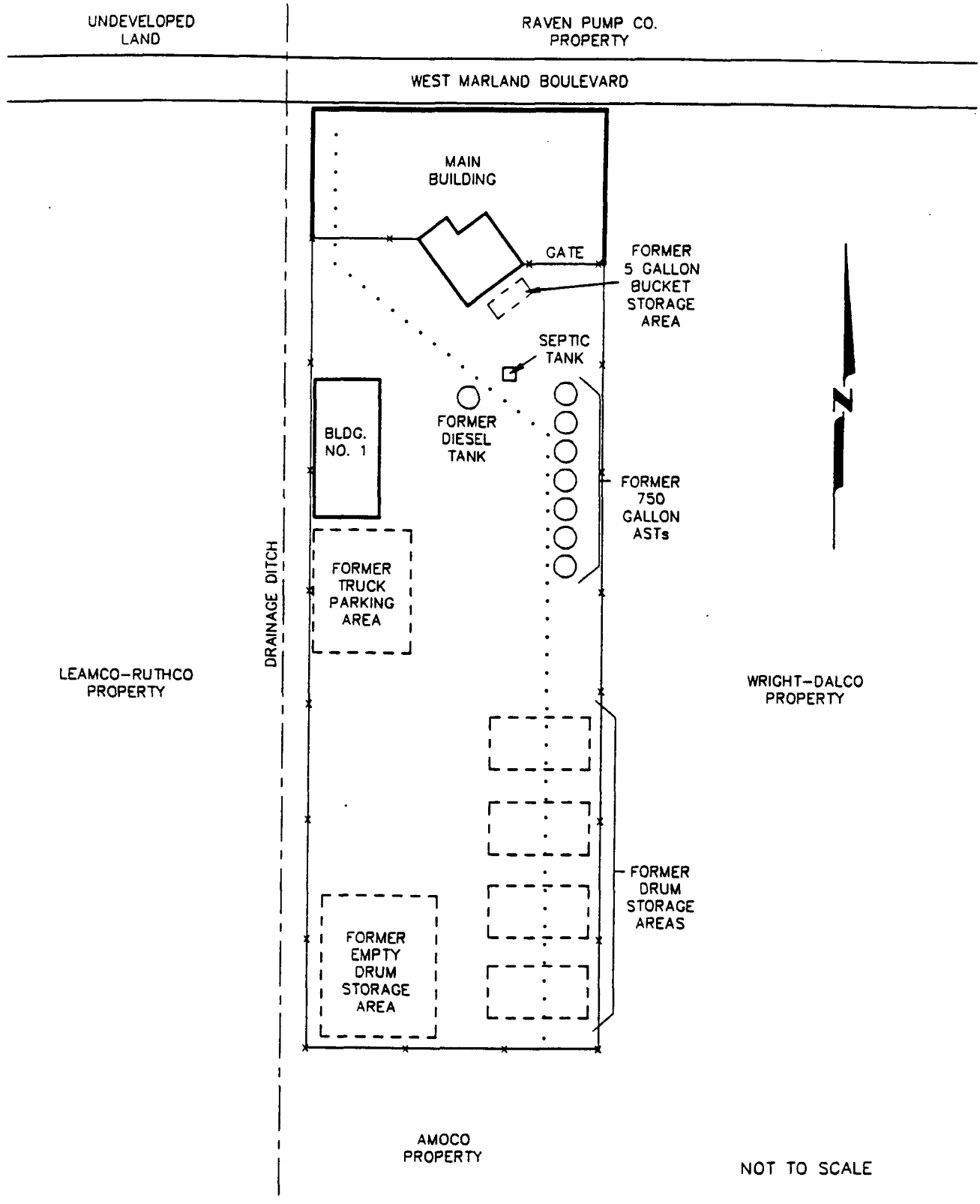
SITE LOCATION MAP

CHEMICAL DISTRIBUTION COMPANY

HOBBS, NEW MEXICO

DRAWN: L.GAMBLE	DATE: 3-2-92	PROJECT NUMBER:	
APPV'D:	REVISED:	1009-001-160	

1009TOPO



LEGEND

- EXISTING STRUCTURE
- FENCE
- GAS PIPELINE

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FIGURE 2-2
SITE PLOT PLAN
CHEMICAL DISTRIBUTION COMPANY
HOBBS, NEW MEXICO

DRAWN: L.GAMBLE	DATE: 3-2-92	PROJECT NUMBER:
APPV'D:	REVISED:	1009-001-160

CE100907

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Attorneys

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November 10, 1992

Writer's Direct Number:
(512) 479-9752

Hobbs News Sun
201 North Thort
Hobbs, New Mexico 88240

VIA FEDERAL EXPRESS
(Standard Overnight)

Attn: Marcella Joyce

Re: Public Notice

Dear Ms. Joyce:

Enclosed is a Public Notice item to be published in the Monday, November 16, 1992 edition of the Hobbs News Sun. Because this is a legal notice, I will need a Publisher's Affidavit confirming that the notice was indeed published on November 16, 1992. The affidavit should include a clipping of the notice as it appeared in the newspaper. Please send any bill for this service to me at the above address.

Thank you for your cooperation in this matter. Please feel free to call me if you have any questions or need additional information.

Very truly yours,

Patricia E. Carls

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Enclosure

cc: R. Anderson, OCD

NOTICE

Exxon Chemical Company, a division of Exxon Corporation ("Exxon") plans to conduct Removal Action Activities at two sites located in the City of Hobbs. The sites are located at 1765 Dal Paso Street, and at 2607/2609 West Marland Boulevard. An Engineering Evaluation/Cost Analysis has been prepared. This document is available for review at:

Hobbs Public Library
509 North Shipp
Hobbs, New Mexico 88240.

The soils at the two properties are contaminated with constituents from chemicals used in oil field production and drilling that were spilled or leaked onto the ground. Exxon intends to (1) remove the contaminated soils as per State requirements; (2) dispose of the soils on an authorized off-site landfill; and (3) backfill the property with clean soil from an off-site source.

Written comments on the Engineering Evaluation/Cost Analysis may be submitted on or before December 16, 1992 to:

Mr. J. Paul Reed
Environmental Coordinator
Exxon Chemical Company
8230 Stedman
Houston, Texas 77029.

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BROWN McCARROLL & OAKS HARTLINE

Attorneys

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September 9, 1992

Writer's Direct Number:
(512) 479-9752

Mr. Roger C. Anderson
Chief, Environmental Bureau
Oil Conversation Division
State of New Mexico
Energy, Minerals & Natural Resources Department
P. O. Box 2088
Land Office Building
Santa Fe, New Mexico 87504-2088

Re: Cleanup of Properties in Hobbs, New Mexico by Exxon Corporation

Dear Mr. Anderson:

On behalf of Exxon Corporation (Exxon), I would like to express our thanks to you and your staff for taking the time to meet with us on July 31, 1992 to discuss the cleanup of two sites owned or formerly operated by Exxon. The sites are on Marland Street and Dal Paso Street in Hobbs, New Mexico.

As required by Rule 1-203 of the New Mexico Water Quality Control Commission Regulations, Exxon notified the Oil Conservation Division of discharges at the facilities in Hobbs. As is detailed in the environmental site assessment reports for each of the facilities, Exxon has discovered evidence of soil contamination at the two facilities. Because the Oil Conservation Division does not have jurisdiction over hazardous waste, you requested that Exxon collect in situ representative samples of the contaminated soils at both sites and analyze the samples according to the Toxicity Characteristic Leaching Procedure (TCLP) to verify that the contaminant levels are not greater than the hazardous waste toxicity characteristic levels set forth at 40 C.F.R. § 261.24. Such sampling was conducted on Thursday, September 3, 1992.

We also understood from our meeting that, if the sampling results confirm that no hazardous waste is present at both sites, Exxon must submit brief workplans describing the proposed cleanup activities for your review and approval. We also understood that the cleanup work at the sites would be governed primarily by Rule 1-203 of the New Mexico Water Quality Control Commission Regulations, as well as the October 29, 1991 Guidelines

for Surface Impoundment Closures (the "Guidelines"). However, we also understood that the agency may use its discretion in interpreting and enforcing the Guidelines. We also understand that submission of the workplans coupled with our July 31, 1992 meeting constitutes compliance with any applicable State notification requirements.

We expect the TCLP sampling results to be available in October 1992. If the sampling results confirm that no hazardous wastes are present at the sites, we intend to prepare workplans for your review and approval. We anticipate that such workplans will be submitted prior to the end of 1992. Upon completion of the OCD-approved workplans, a final report confirming completion of the workplan will be submitted to your Agency.

Please let me know if I have inadvertently misstated our understanding or if you have any questions or need additional information. We look forward to working with you on these projects.

Very truly yours,

Patricia E. Carls

Patricia E. Carls

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13232.68180

cc: D. Sigman
P. Reed
J. Smith
J. Young

7/31/92 Exxon Hobbs Chemical Facility 9:30 am

participants Roger Anderson
Bill Olson
Chris Enctin
Keith Hopson - Brown, McCarrol & Oakes Hartlin
Patricia Carlos - " " " "
Jay Swingle - EMSR
Paul Reed - Exxon

P.R. Review site investigation report
~~2~~ sites in Hobbs

J.S. 1) Site Del Paso south ~~of~~ Hobbs on Eunice Hwy
Phase I & II investigation
Metals (totals) above TC levels
Need to
1.) check for TCLP on metals at surface
2.) check " " " " all septic tank
prior to closure

Exxon will submit work plan for remediation

2.) West Maryland site

6

BROWN McCARROLL & OAKS HARTLINE
Attorneys

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July 2, 1992

Writer's Direct Number:
(512) 479-9752

Mr. Roger Anderson
Energy, Minerals & Natural
Resources Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Exxon Chemical Company Sites in Hobbs, New Mexico

Dear Mr. Anderson:

Thank you for taking the time on Tuesday, June 30, 1992 to discuss the referenced matter. As I mentioned, Exxon Chemical Company (Exxon) has completed Phase I and Phase II environmental audits of two oil field service satellite facilities in Hobbs, New Mexico. As is detailed in the enclosed reports, the contaminated soils discovered at these sites may require remediation. Therefore, we would like to meet with you at 9:30 a.m. on Friday, July 31, 1992 to discuss this matter.

The enclosed reports describe the sites' current use, former uses, and present condition. In brief, Exxon acquired the sites in Hobbs from NL Industries, Inc. in November 1987. Exxon took title to the site on Dal Paso Street and assumed the lease to the site on West Marland Street. The Dal Paso Street site is still an active facility. However, the lease on the West Marland Street has been terminated. The property on Dal Paso Street was used by Exxon and NL Industries, Inc. for storing and distributing oil field chemicals. The chemicals were stored in drums and in above-ground storage tanks. The property on West Marland Street was used by Exxon and NL Industries, Inc. primarily for office space, but the yard area may have been used intermittently for chemical storage. Exxon and NL Industries, Inc. are currently discussing certain issues relating to the cleanup of these properties.

The meeting on July 31, 1992 will be attended by a representative of Exxon Chemical Company, Paul Reed; a representative of ENSR Consulting and Engineering, Jay Swindle; myself and Keith Hopson from this firm; and perhaps representatives from NL Industries, Inc. Now that site data has been developed, we need to explore what may

be necessary. We would appreciate the agency's input on appropriate action and cleanup levels as well as other aspects possibly involved in such a project.

We look forward to meeting with you on Friday, July 31, 1992. In the meantime, please do not hesitate to call if you have any questions or need additional information.

Very truly yours,

Patricia E. Carls

I:\PS\CARLST\117347.1
13232.68180

Enclosures

icc: K. Hopson
S. Oaks