3R - 82

REPORTS

DATE:

2/5/1996

Midland Division
Exploration Production

Conoco Inc.
10 Desta Drive, Suite 100W
Midland, TX 79705-4500
(915) 686-5488

Mr. William C. Olson
Environmental Bureau
New Mexico Oil Conservation Division
Post Office Box 3088
Santa Fe, NM 87504

Dear Mr. Olson:

RE: GROUNDWATER CLOSURE FOR ERIN STAYS COM 1E SEC. 2, T 25N, R 11W.

Recently, Conoco performed additional test on our on-site landfarm and groundwater plumes. The results indicated that the TPH level met closure standards while BTEX levels at the saturated clay level have continued to rise. No additional sources have been added to the site that could increase the contamination since the unlined pits had been removed in 1994. The results point to the fact that groundwater encountered is limited and vertical/lateral isolation is present. It's Conoco's conclusion that after ceasing discharge, the contaminated water remaining in the saturated clays are emitting concentrated BTEX levels within the isolated plume areas. Limited yields of .30 gal/hr for DP #3 and .25 gal/hr for DP #4 was noted during our latest sampling events in October of 1995. The compilation of assessment work has indicated that post monitoring methods outside of the plume are impractical or impossible due to the lack of water down gradient of the contamination. Bullet points below summarize our current activity to date.

- Discharge has been ceased into unlined pits for subject site since November of 1994.
- Initial boring and sampling was performed by On-Site Technologies, LTD.
- Gross soil contamination was excavated down to bedrock formation at the pit locations.
- The pits were back filled with clean sandy soil.
- The soil contamination was thin spread over the well location.
- The landfarm site has reached TPH limits for closure.
- The purched aquifer (plume area) has been re-tested for BETEX levels.

Enclosed is additional background data and test results associated with the site. Please include this in our site delineation for Erin Stay Com 1E report from Western Technologies.

The site assessments and analysis reports concludes that the pocket of contamination will remain stationary and should degrade over time. Conoco is requesting that the OCD grant conditional closure regarding groundwater contamination and that without further incident no additional assessment, sampling or remediation will be added to the site. Thank you for your continued support.

Respectfully yours,

Neal Goates
Environmental Coordinator

Summations from Environmental Contractors

ON-SITE TECHNOLOGIES

On September 30, 1994, the initial assessment for pit closure was performed for the Erin Stays by On-Site Technologies prior to the Conoco acquisition from Nassau. The investigation included the drilling of 7 test holes to a depth of approximately 30 feet. Four out of the seven test holes revealed localized groundwater or damp soil. Of the four containing groundwater, one was a test hole drilled in the center of the dehydrator pit (DP1) and the second was drilled in the center of the separator pit (DP2). DP1 and 2 was sampled and determined that contamination existed down to 28 feet and into a perched water zone. One additional well (DP4) had contamination within the saturated phase at approximately 28 feet situated southwest of DP1. Well DP3 did have groundwater but test revealed trace amounts (below regulatory limits). The remainder of the wells (TH 5,6,7) were dry holes (Diagram 1).

To the south of the location about three hundred feet is the beginning of a small arroyo that slopes to the southwest. It's total depth near the location is about six feet. Running through the location from a southwest/northeast direction is a natural gas pipeline.

It appears from the surface topography that the water encountered at the location is the result of the location creating it's own aquifer. The well casing, pipeline, and other facilities upon the location have possibly formed natural conduits to collect surface runoff, which appeared to have traversed the sands described in the same manner as the contaminates from the pits and came to rest on the slate/clay layer. TDS was measured at 6,182 ppm. Visual observation of the water encountered in DP2 did not indicate any particular direction of flow. To further corroborate the theory of isolation, contamination was identified in DP1 but very little groundwater was present, and DP 2,3,4 had a static water level of about two feet below surface. The water hydraulic gradient appeared to be on the order of 0.013 ft/ft to 0.033 ft/ft. The fact that DP3 had no contamination that exceeded NMWQCC regulatory action levels, lateral/vertical movement of any residual contaminates would be slight after discharge was ceased.

TIERRA SPECIAL PROJECTS

On October 14, 1994, Nassau contracted the excavation of the separator pit and the dehydrator pit. Both pits were excavated to a depth of thirty feet. Tierra Special Projects Manager, Ms. Connie Dinning PE, observed the excavation activities and determined that the dehydration pit area encountered damp sand directly above a shale/clay layer at approximately 29 to 30 feet deep. The bedrock layer was observed to be six to eight inches thick and impermeable to associated pit discharges and water migration. The separator pit had the same soil characteristics and depths but revealed water yielding approximately one gallon per hour during the pit excavation process. The contaminated soil was thinly spread across the location for natural biodegradation, the accumulation of free water during the excavation was removed from the separator pit, and the pits were backfilled with clean soil.

WESTERN TECHNOLOGIES

On May 18, 1995, Western Technologies Inc. performed an additional assessment for full delineation of the contaminated vadose, capillary fringe, and phreatic zones. The investigation confirmed 1994 data and identified isolated plumes down gradient toward the southwest of former pit locations. This investigation substantiated that the plume produced by the pits had no lateral movement between the seven month investigation interval and revealed that the location was void of down gradient connectors for continued lateral/vertical migration. Attempts to sample the water was difficult due to the fact that the previous saturated zone provided limited or no yield after ceasing discharge and excavation of the pits in October of 94.

DATE DRILLED: 05-23-1995 BORING NUMBER: B#7

LOCATION: See Site Plan (Figure 1) ELEVATION: Not Determined

HEADSPACE READING	BLOWS per FOOT	SAMPLE TYPE	SAMPLE	PETRO. ODOR	DEPTH	USCS	GRAPHIC	SOIL DESCRIPTION
					0	SP-SC		SANDS; undifferentiated.
0.0		G		NONE	10	SM/SC		SAND; silty, with clay to clayey, light brown, slightly moist, no hydrocarbon odor or staining.
								12 Feet Stopped At 12 Feet

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

ND - "None detected"
N - Split-spoon sampler
G - Grab (scoop) Driving weight: 20
Headspace by New Mexico USTR, Chapter XII Appendix C.

NOTES:
Borings driven to depth using slide hammer.

CONOCO; ERIN STAYS COM 1E

Boring Log

WESTERN TECHNOLOGIES INC.

Job No: 3185JC065 Plate: 7

SAN JUAN BASIN **PIT CLOSURE DOCUMENTATION**

LOCATION: ERIN STATE Com 1E **RCRA EXEMPT WASTES:** Yes [X] No [ ]

PIT TYPE: DNP / SEP

DATE FLOW TO PIT STOPPED: BOTH ACTIVE - LIGHT STAINS

TYPE REPLACEMENT PIT: [ ] NONE [ ] BACKFILLED – BELOW GROUND [ ] ABOVE GROUND

ACREAGE TYPE: [ ] FEDERAL [ ] JICARILLA [X] NAVAHO [ ] STATE [ ] FEE

SITE ASSESSMENT

	Ranking Score
1) Groundwater Depth: < 50'	
Basis: ESTIMATED - UPGRADIENT FROM DRAW - ENCOUNTERED	20
2) Wellhead Protection Area: NEAR INITIAL EXCAVATION @ 27'	
Distance To Water Sources: > 1000' Private Domestic Water Sources: > 200'	
Basis: NO PRIVATE OR DOMESTIC WTR SOURCE IN VICINITY	0
3) Distance To Surface Body of Water: > 1000'	
Basis: NO SURFACE WTR IN VICINITY	0
Total Score:	20

Soil Characteristic

[ ] Highly Contaminated/Saturated [X] Unsaturated Contaminated

RANKING CRITERIA

Depth to Groundwater	Score	Wellhead Protection Area: <1000' from water source or < 200' from private domestic water source	Score	Distance to Surface Water Body	Result
<50 ft	20	yes	20	<200' horiz	20
<50 – 99	10	no	0	200 – 1000' horiz	10
>100 ft	0			>1000' horiz	0

GUIDELINE REMEDIATION LEVELS

Total Ranking Score	>19	10–19	0–9
Benzene (ppm)	10	10	10
BTEX (ppm)	50	50	50
Field Headspace Method for BTEX	100	100	100
TPH (ppm) **	100	1,000	5,000

** Concentration above background

DEFINITION OF CONTAMINATION

Date: _____

Depth Excavated: 30'

Full Excavation : [✓] Maximum Extent Practicable _____

ALL SAMPLE RESULTS ARE SHOWN ON "SAMPLE RESULTS NOTES" FORM

Groundwater Encountered: Yes [X] No [ ]

If yes, approximate depth: ± 27'

Groundwater Sampling? [X] Yes [ ] No

Where was gw sample taken? DOWNGRADIENT DNP & SEP.

Attach GW Sample Results

NOTES:

Post-it® Fax Note 7671	Date 1/30/96	# of pages ▶ 3
To NEIL GOATES	From CBC	
Co./Dept. CONOCO	Co. CONOCO	
Phone #	Phone #	
Fax #	Fax #	

REMEDIATION PROFILE

Soil Treated Onsite ☐ Date Remediation Started: 11-9-94

☐ In Situ Bio ☐ w/vapor venting ☒ Landfarmed ☐ Composted

	Date: 11-9-94 Description	Amount/Rate	Date Description	Amount/Rate
Tilled	LANDFARM CONTAMINATED SOIL			
Nutrients K-Power KNO_3	13.7% NITRO, 44.5% POTASH	200#		
Moisture				
Bulking Agent				
Organic Material				

	Date: Description	Amount/Rate	Date: Description	Amount/Rate
Tilled				
Nutrients				
Moisture				
Bulking Agent				
Organic Material				

ALL SAMPLE RESULTS ARE SHOWN ON "SAMPLING RESULTS NOTES" FORM

SOIL TREATED/HANDLED OFFSITE

TO SITE(ATTACH MANIFEST)

Where Treated: _____

Type of Land (Fed/Nav/Jic/State/Fee): _____

Quantity Moved: _____

Quantity Disposed At Envirotech: _____

FROM SITE (ATTACH MANIFEST)

To This Location From: _____

Type of Land (Fed/Nav/Jic/State/Fee): _____

Quantity Moved: _____

FINAL CLOSURE

BTEX: ND ppm (From Headspace Analysis) TPH: 38 ppm (From Lab Results)

Revegetated: yes ☐ no ☑

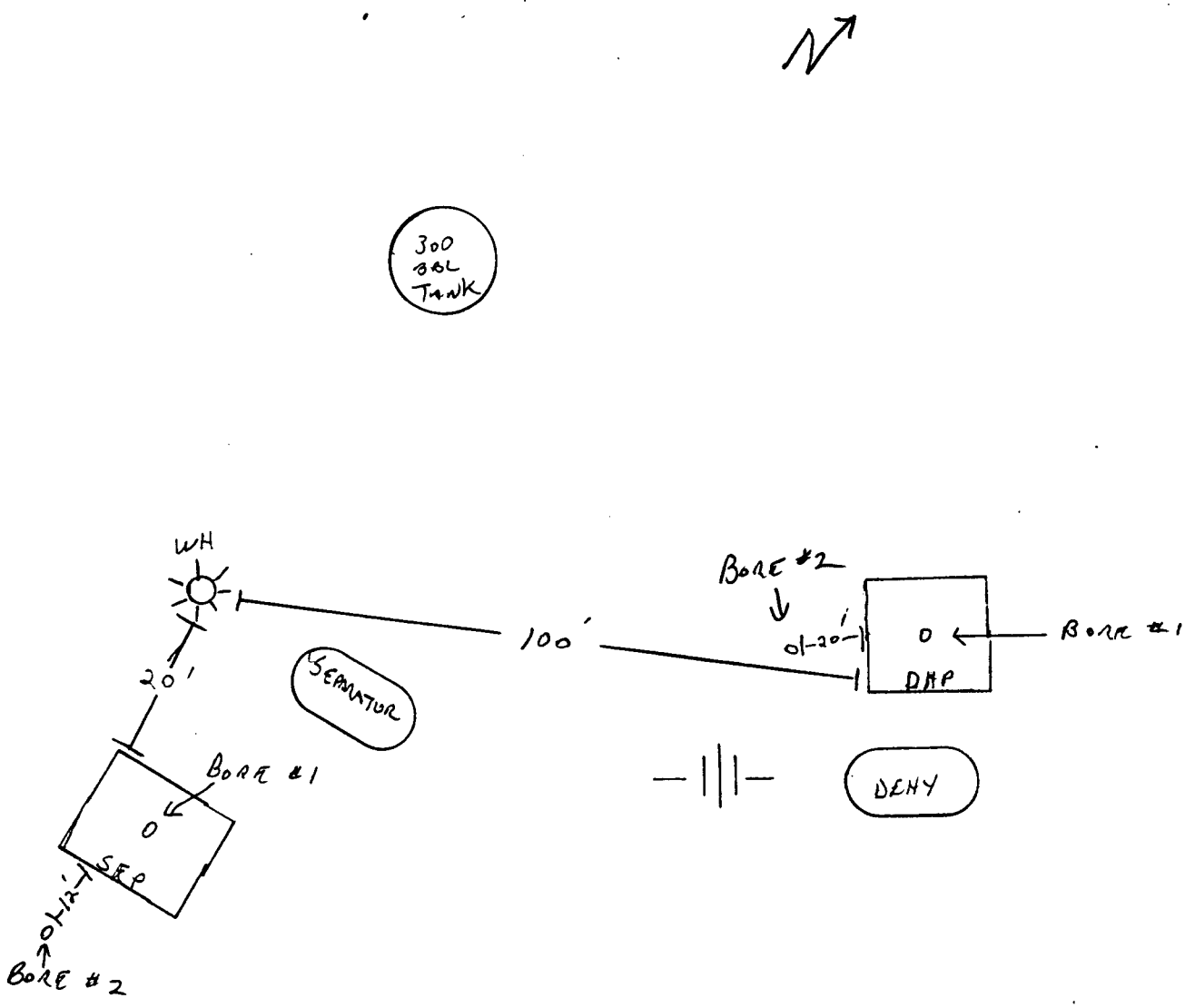
Active Well or Facility Pad: yes ☑ no ☐

NOTES: 9/30/94 - RU ONSITE TECH, PERFORM ASSESSMENTS, BORED 4 HOLES - (2 ON FALN PIT) ENCOUNTERED GW, PULLED SAMPLES. 10-11-94 - PERFORMED FURTHER DELINEATION IN ATTEMPT TO DEFINE PLUME & GRADIENT. 10-14-94 - NASSAU EXCAVATED PITS TO 30'. 11-9-94 - CONOCO LANDFARMED SOIL & BACKFILLED PITS W/ CLEAN SOIL FROM LOCATION. CONOCO SET EL PIT TO REPLACE DHP & SEP EARTHEN PITS. 10-16-95 - PULLED COMPOSITE SOIL SAMPLE TO CLOSE LANDFARM.

PIT LOCATION AND COMPOSITE SAMPLE PROFILE MAP

WELL LOCATION: ERIN STATS Com 1E S___ T___ R___ UNIT___

DATE STARTED: 9/30/94 (ONSITE TECH. ASSESSMENT) DATE COMPLETED: _____



o SOIL SAMPLE LOCATION

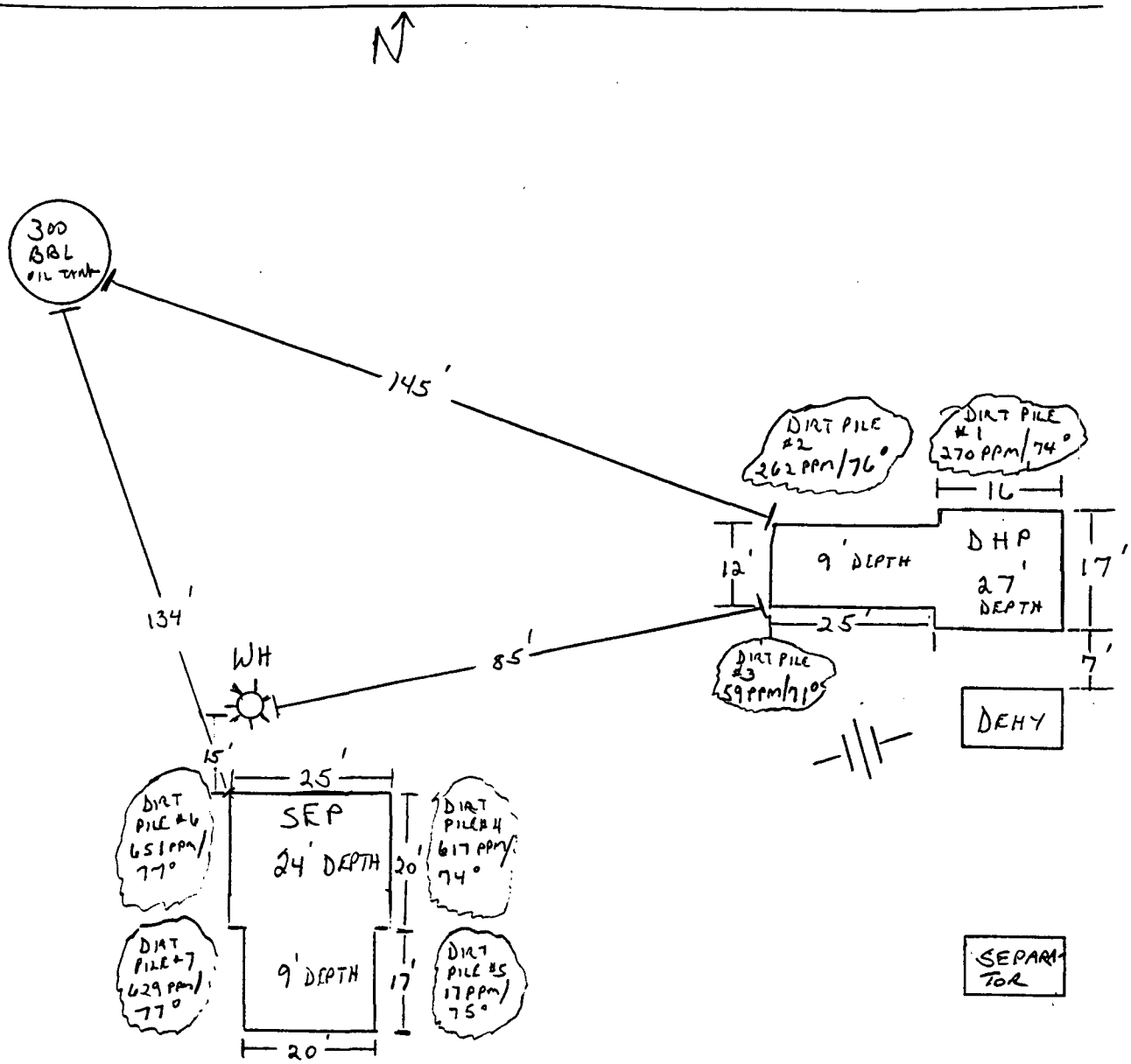
Δ BACKGROUND SAMPLE LOCATION

PIT LOCATION AND COMPOSITE SAMPLE PROFILE MAP

WELL LOCATION: ERIN STAYS COM 1E S___ T___ R___ UNIT___

DATE STARTED: 11/9/94 DATE COMPLETED:___

EXCAVATED PIT INFORMATION: 100.4



- BOTH PITS HAD SLUFFED IN SOME, INITIAL EXCAVATION WAS TO 30' DEPTH

o SOIL SAMPLE LOCATION

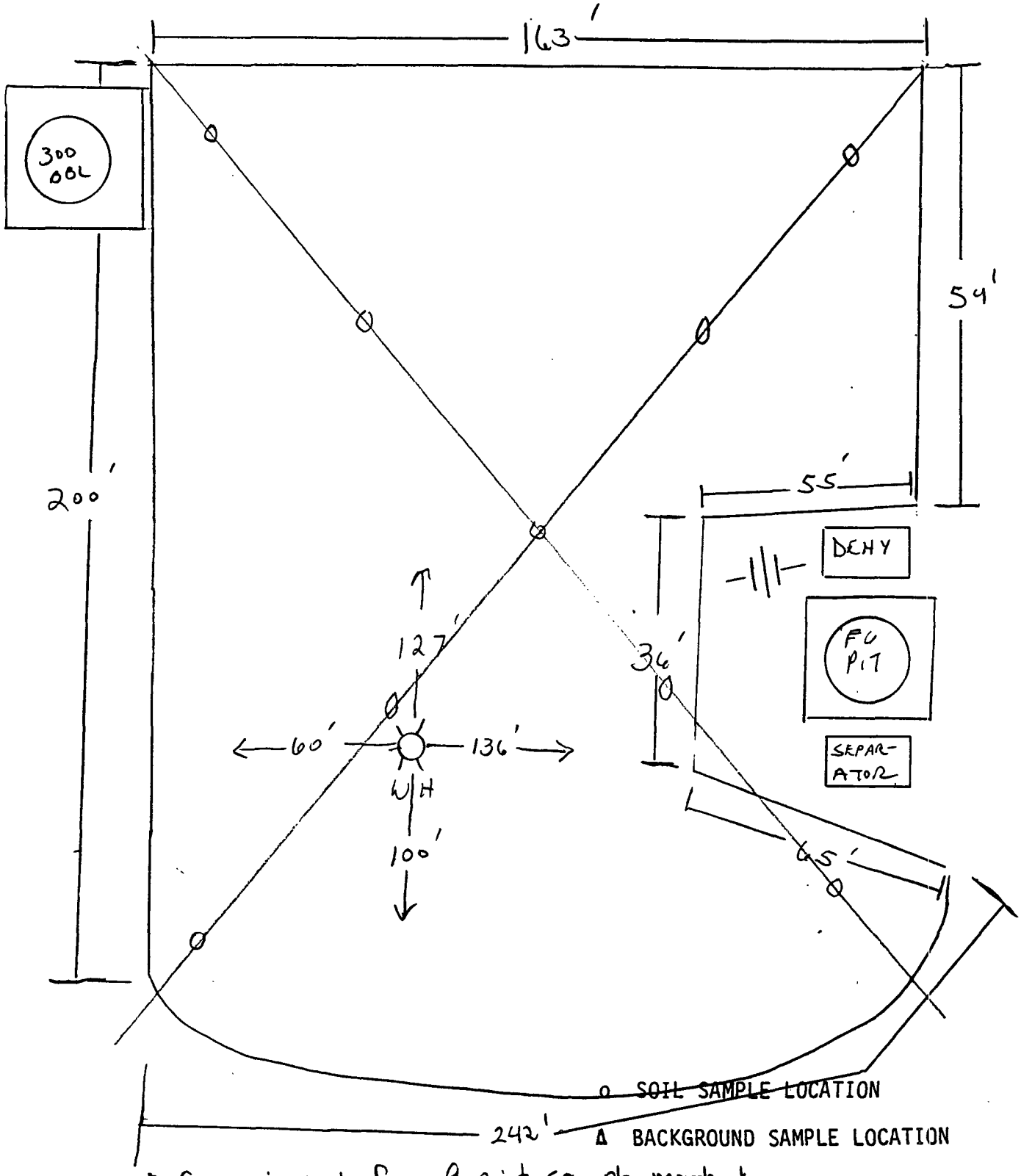
Δ BACKGROUND SAMPLE LOCATION

PIT LOCATION AND COMPOSITE SAMPLE PROFILE MAP

WELL LOCATION: ERIN STATE Com 1E S___ T___ R___ UNIT___

DATE STARTED: 9/9/94 DATE COMPLETED:

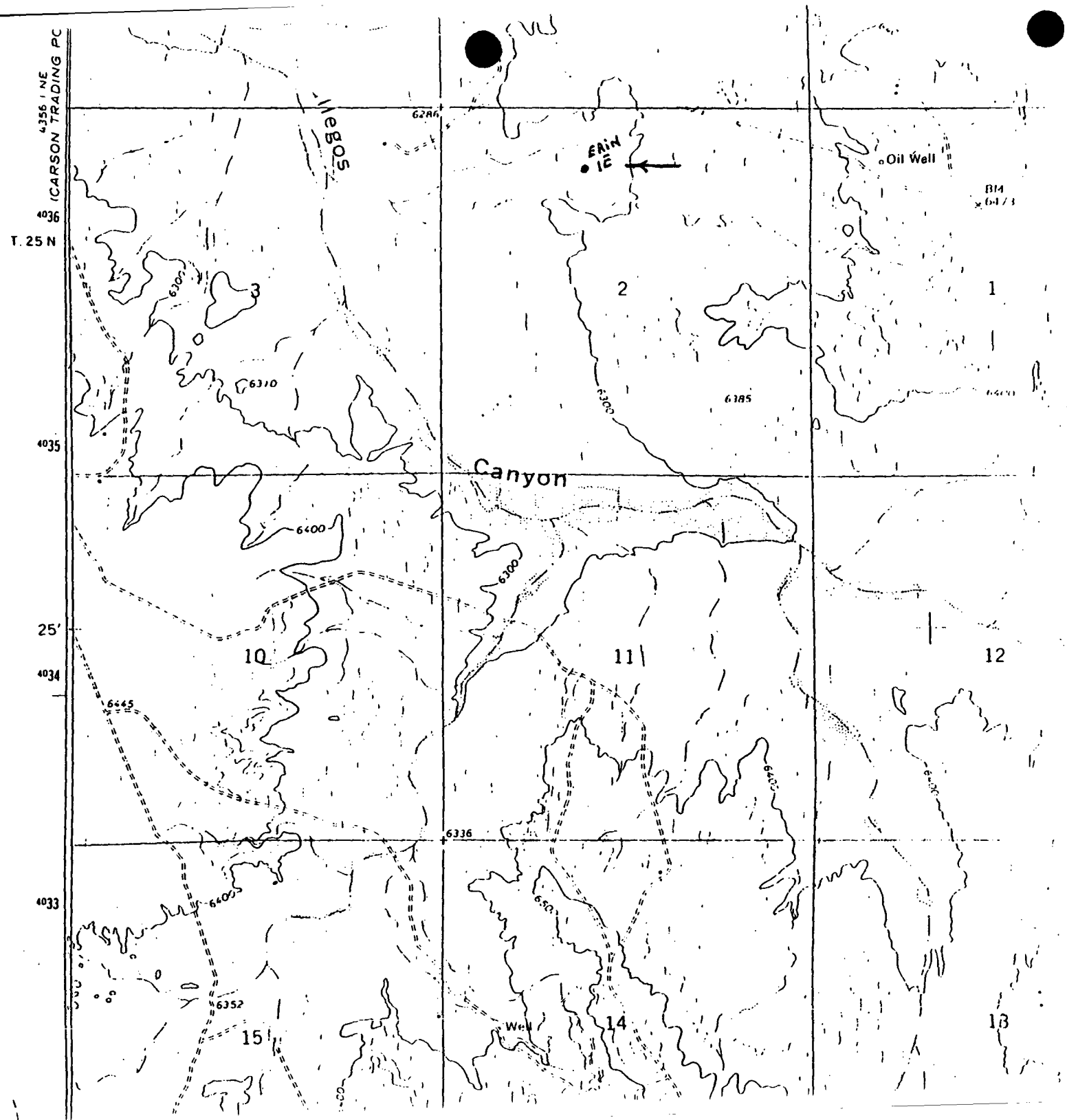
LANDFARMED AREA:



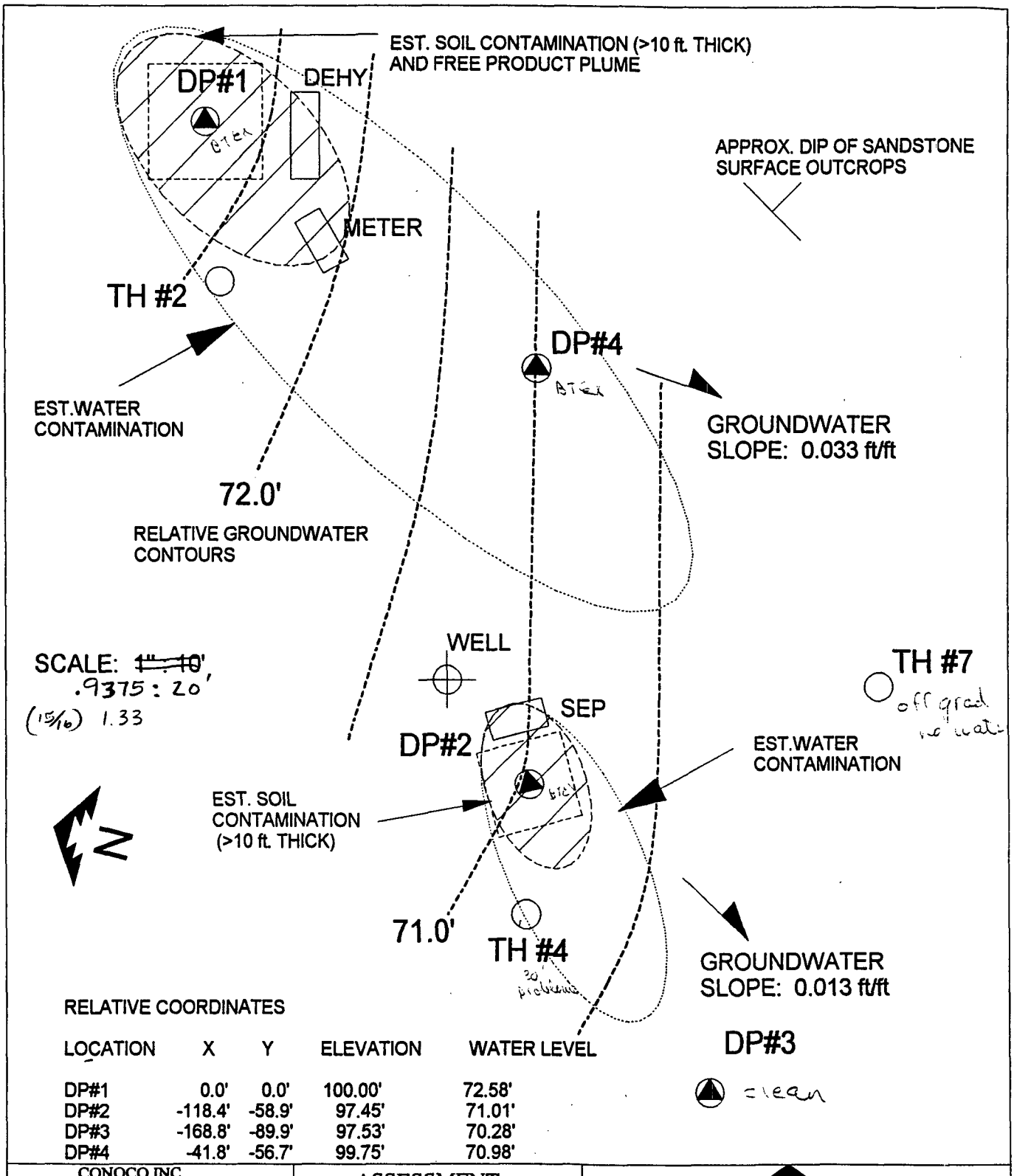
o SOIL SAMPLE LOCATION

Δ BACKGROUND SAMPLE LOCATION

o- Composite made from 9 point sample method.



USGLO
T25N R1W
S 15 | 14



RELATIVE COORDINATES

LOCATION	X	Y	ELEVATION	WATER LEVEL
DP#1	0.0'	0.0'	100.00'	72.58'
DP#2	-118.4'	-58.9'	97.45'	71.01'
DP#3	-168.8'	-89.9'	97.53'	70.28'
DP#4	-41.8'	-56.7'	99.75'	70.98'

CONOCO INC. NASSAU PIT ASSESSMENTS SAN JUAN BASIN, NM		ASSESSMENT SUMMARY
PROJECT: ERIN STAY COM #1E		DRWN: OCT 11, 1994
PROJECT NO: 4-1127(PIT #15)		DRWN BY: MKL
SHEET: 1	FILE: 41127ESC.CAD	REVISED:

ON SITE TECHNOLOGIES, LTD.
P.O. BOX 2606, FARMINGTON, NM 87499
(505) 325-5667

DP1 – DP4 = 57.19' = .0279 ft/ft
DP1 – DP2 = 105.07 = .0149 ft/ft

PIT CLOSURE DOCUMENTATION – SAMPLING RESULTS NOTES

LOCATION OF PIT: ERIN STATE Com 1E TYPE OF PIT: DHP

	SAMPLE EVENT #	1/2	SAMPLE EVENT #	3/4	SAMPLE EVENT #	5/6	SAMPLE EVENT #	7/8	SAMPLE EVENT #	9/10	SAMPLE EVENT #	11	SAMPLE EVENT #		SAMPLE EVENT #	
DESCRIPTION OF SAMPLE	Bore #1								Bore #2							
DATE OF SAMPLE	9/30/94	"	"	"	"	"	"	"	9/30/94	"	"					
LOCATION OF SAMPLE	CENTER OF PIT	"	"	"	"	"	"	"	20' WEST OF PIT	"	"					
TYPE OF SAMPLE: (GRAB/COMPOSITE)	CUTTINGS COMP	"	HA	CUTTINGS	"	"	"	"	"	"	"					
DEPTH OF SAMPLE(S)	3	6	9-10	15	19	21	24	27	9	17	22					
TEMPERATURE OF SAMPLE																
FIELD METHOD RESULTS (PPMS)																
TPH VAPORS (EQUIV UNITS)	1164	1497	773	399	1410	455	1371	997	NA	ND	ND					
BENZENE RESPONSE FACTOR																
ADJUSTED FOR BENZENE EQUIV UNITS																
LAB RESULTS IN PPM:																
METHOD (418.1 OR MOD 8015)																
TPH																
NOTES																

PIT CLOSURE DOCUMENTATION – SAMPLING RESULTS NOTES

LOCATION OF PIT: ERIN STATE #1E TYPE OF PIT: DRY

	SAMPLE EVENT # 1	SAMPLE EVENT # 2	SAMPLE EVENT # 3	SAMPLE EVENT # 4	SAMPLE EVENT # 5	SAMPLE EVENT # 6	SAMPLE EVENT #	SAMPLE EVENT #
DESCRIPTION OF SAMPLE	Boring #6							
DATE OF SAMPLE	10/11/94	"	"	"	"	"		
LOCATION OF SAMPLE	50' S-SW	"	"	"	"	"		
TYPE OF SAMPLE: (GRAB/COMPOSITE)	Cut. Grab	"	"	"	"	"		
DEPTH OF SAMPLE(S)	5'	10'	15'	20'	25'	27.5		
TEMPERATURE OF SAMPLE	120°F	110°F	120°F	100°F	120°F	120°F		
FIELD METHOD RESULTS (PPMS)								
TPH VAPORS (EQUIV UNITS)								
BENZENE RESPONSE FACTOR	0.56	"	"	"	"	"		
ADJUSTED FOR BENZENE EQUIV UNITS	ND	ND	7.4	25.4	14.5	>2500		
LAB RESULTS IN PPM:								
METHOD (418.1 OR MOD 8015)								
TPH								
NOTES	MOD to Coarse Sand, Dry to Sl. Moist, Loose to Firm.	SAA	Silty Clay, Dry, Hard, Plastic.	Silty Fine - Med Sand, Moist, Dense	SAA			

PIT CLOSURE DOCUMENTATION – SAMPLING RESULTS NOTES

LOCATION OF PIT: ERIN STAYS #1E TYPE OF PIT: DHY

	SAMPLE EVENT # 1	SAMPLE EVENT # 2	SAMPLE EVENT # 3	SAMPLE EVENT # 4	SAMPLE EVENT # 5	SAMPLE EVENT # 6	SAMPLE EVENT #	SAMPLE EVENT #
DESCRIPTION OF SAMPLE	BORING #7							
DATE OF SAMPLE	10/11/94	"	"	"	"	"		
LOCATION OF SAMPLE	100' S-SW	"	"	"	"	"		
TYPE OF SAMPLE: (GRAB/COMPOSITE)	CUT GRAB	"	"	"	"	"		
DEPTH OF SAMPLE(S)	5'	10'	15'	20'	25'	30'		
TEMPERATURE OF SAMPLE	110+°F	"	"	"	"	"		
FIELD METHOD RESULTS (PPMS)								
TPH VAPORS (EQUIV UNITS)								
BENZENE RESPONSE FACTOR	0.56	"	"	"	"	"		
ADJUSTED FOR BENZENE EQUIV UNITS	ND	2.1	4.1	ND	ND	ND		
LAB RESULTS IN PPM:								
METHOD (418.1 OR MOD 8015)								
TPH								
NOTES	LAMINATED SILTY CLAYS & FINE SANDS, DRY, FIRM TO HARD, SL. PLASTIC.							

PIT CLOSURE DOCUMENTATION – SAMPLING RESULTS NOTES

LOCATION OF PIT: Erin Stays Com 1E TYPE OF PIT: SEP

	SAMPLE EVENT # 1/2		SAMPLE EVENT # 3/4		SAMPLE EVENT # 5/6		SAMPLE EVENT # 7/8		SAMPLE EVENT # 9/10		SAMPLE EVENT # 11		SAMPLE EVENT #		SAMPLE EVENT #	
DESCRIPTION OF SAMPLE	Bore #1	11	11	11	11	Bore #2	11	11	11	11	11					
DATE OF SAMPLE	9/30/94					9/30/94										
LOCATION OF SAMPLE	Center of SEP	11	11	11	11	South of SEP 12' from fence	11	11	11	11	11					
TYPE OF SAMPLE: (GRAB/COMPOSITE)	Cutting Grab	HA	Cutting	11	11	Cutting	11	11	11	11	11					
DEPTH OF SAMPLE(S)	3	9	15	21	27	9	12	18	21	24	27					
TEMPERATURE OF SAMPLE																
FIELD METHOD RESULTS (PPMS)																
TPH VAPORS (EQUIV UNITS)	187	469	1507	1402	1309	ND	ND	ND	ND	ND	161					
BENZENE RESPONSE FACTOR																
ADJUSTED FOR BENZENE EQUIV UNITS																
LAB RESULTS IN PPM:																
METHOD (418.1 OR MOD 8015)																
TPH																
NOTES																

PIT CLOSURE DOCUMENTATION – SAMPLING RESULTS NOTES

LOCATION OF PIT: ERIN STAYS #1E TYPE OF PIT: SEP PIT

	SAMPLE EVENT # 1	SAMPLE EVENT # 2	SAMPLE EVENT # 3	SAMPLE EVENT # 4	SAMPLE EVENT # 5	SAMPLE EVENT # 6	SAMPLE EVENT #	SAMPLE EVENT #
DESCRIPTION OF SAMPLE	BORING # 5	"	"	"	"	"		
DATE OF SAMPLE	10/11/94							
LOCATION OF SAMPLE	50' SW PIT	"	"	"	"	"		
TYPE OF SAMPLE: (GRAB/COMPOSITE)	CUTTINGS GRAB	"	"	"	"	" OFF BIT		
DEPTH OF SAMPLE(S)	5'	10'	15'	20'	25'+	27'		
TEMPERATURE OF SAMPLE	100+ °F	"	"	"	>200°F	75°F		
FIELD METHOD RESULTS (PPMS)								
TPH VAPORS (EQUIV UNITS)								
BENZENE RESPONSE FACTOR	0.56	"	"	"	"	"		
ADJUSTED FOR BENZENE EQUIV UNITS	11.2	18.3	ND	ND	4.2	ND		
LAB RESULTS IN PPM:								
METHOD (418.1 OR MOD 8015)								
TPH								
NOTES	SANDY CLAY TO SILT, DRY, LOOSE, SL. PLASTIC.	SAA "	SAA, DRY & HARD.	SAA	SAA, MOIST, STIFF.	SILTY SAND, [illegible], [illegible]. NO ODOR OR DISCOLOR.		

ERIN STAY COM #1E
NE/NW SEC 2, T25N,R11W, NMPM
SAN JUAN COUNTY, NM

DEHY PIT ASSESSMENT 9/30/94
PIT LOCATED @ APPROX. 100' EAST OF WELL HEAD
PIT BOTTOM APPROX. 4' BELOW SITE GRADE.

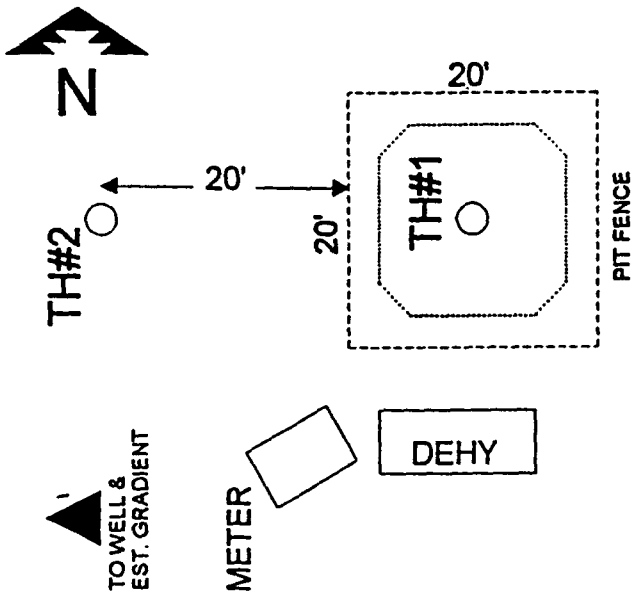
SOIL PROFILE: (ALL REFERENCED TO SITE GRADE)
0-25' SILTY MEDIUM SAND TO SANDY SILT (SM/ML); LT BRN, MOIST, FIRM.
25-27' SILTY SAND TO SANDY SILT(SM/ML); SAA, WET TO SATURATED.
27'+ SILTY CLAY (ML/CL); MOIST TO WET, STIFF, SL.PLASTIC.

IMPACTED SOILS: GREY TO OLIVE BROWN, MOIST, STRONG PETROLEUM & GLYCOL ODOR. FROM PIT BOTTOM TO GROUNDWATER @ 27' BELOW SITE GRADE. 1/4" FREE PRODUCT ON WATER SAMPLE COLLECTED 9/30/94.

ANALYTICAL SUMMARY

SAMPLE	OVM (ppm)	TPH (ppm)	BENZ. (ppb)
TH#1@3'	1164		
TH#1@6'	1497	12750	
TH#1@9+'	773		
TH#1@15'	399		
TH#1@19'	1410		
TH#1@21'	455	220	
TH#1@24'	1371		
TH#1@27'	997		
TH#2@9'	ND		
TH#2@17'	ND		
TH#2@22'	ND		
TH#1@GW	–		9664

SCALE: 1" : 15'



CONOCO INC. NASSAU PIT ASSESSMENTS SAN JUAN BASIN, NM		ASSESSMENT SUMMARY	ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-3667
PROJECT: ERIN STAY COM #1E, DEHY PIT		DRWN: OCT 3, 1994	
PROJECT NO: 4-1127(PIT #13)		DRWN BY: MKL	
SHEET: 1	FILE: 41127P13.CAD	REVISED:	

ERIN STAY COM #1E
NE/NW SEC 2, T25N,R11W, NMPM
SAN JUAN COUNTY, NM

SEP PIT ASSESSMENT 9/30/94
PIT LOCATED @ APPROX. 100'WEST OF WELL HEAD
PIT BOTTOM @ 3.5' BELOW SITE GRADE

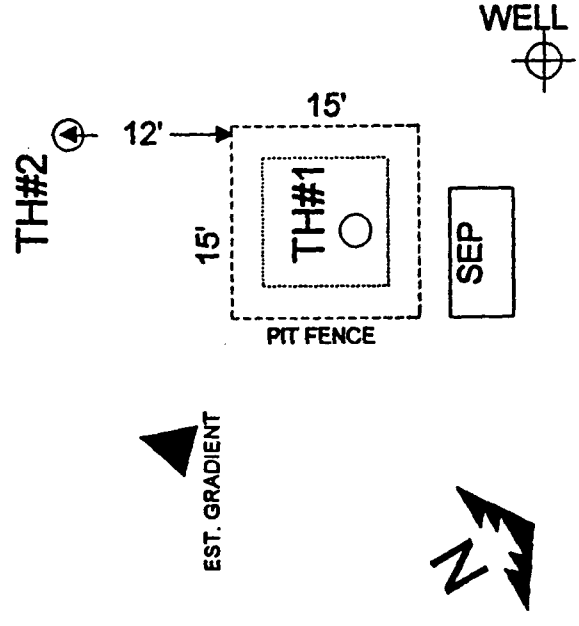
SOIL PROFILE: (ALL REFERENCED TO SITE GRADE)
0-27' SILTY MEDIUM SAND TO SANDY SILT (SM/ML); LT BRN, MOIST, FIRM.
27' SILTY SAND TO SANDY SILT(SM/ML); SAA, WET TO SATURATED.
33'+ SILTY CLAY (ML/CL); MOIST TO WET, STIFF, SL.PLASTIC.

IMPACTED SOILS: GREY TO BLACK, MOIST, PLASTIC, STRONG PETROLEUM ODOR. IN IMMEDIATE PIT AREA TO GROUNDWATER AT 27' BELOW SITE GRADE. OUTSIDE OF PIT ONLY IN VADOSE ZONE ABOVE GROUNDWATER. SHEEN OBSERVED ON WATER SAMPLED 9/30/94.

ANALYTICAL SUMMARY

SAMPLE	OVM (ppm)	TPH (ppm)	BENZ (ppb)
TH#1@3'	187		
TH#1@6'	1469	3850	
TH#1@9'	1507		
TH#1@15'	1402		
TH#1@21'	1309		
TH#1@27'	ND		
TH#2@9'	ND		
TH#2@12'	ND		
TH#2@18'	ND		
TH#2@21'	ND		
TH#2@24'	ND		
TH#2@27+'	161	18	
TH#1@GW	–	–	5176

SCALE: 1" : 15'



CONOCO INC. NASSAU PIT ASSESSMENTS SAN JUAN BASIN, NM	ASSESSMENT SUMMARY	ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667
PROJECT: ERIN STAY COM #1E, SEP PIT	DRWN: OCT 3, 1994	
PROJECT NO: 4-1127(PIT #14)	DRWN BY: MKL	
SHEET: 1 / FILE: 41127P14.CAD	REVISED:	

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 10/1/94

Internal QC No.: 0222-STD
Surrogate QC No.: 0223-STD
Reference Standard QC No.: 0300-STD

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes In Blank	<0.1 ppb

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	20	1	15%
Toluene	ppb	20	20	0	15%
Ethylbenzene	ppb	20	19	6	15%
m,p-Xylene	ppb	40	38	5	15%
o-Xylene	ppb	20	19	4	15%

Spike Results

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	100	102	(39-150)	2	20%
Toluene	95	96	(46-148)	0	20%
Ethylbenzene	99	98	(32-160)	0	20%
m,p-Xylene	101	102	(35-145)	1	20%
o-Xylene	99	103	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	S3 Percent Recovered
Limits	(70-130)		
3362-2150	100		

S1: Flourobenzene

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Michael K. Lane*	Date:	10/1/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample ID:*	*3362*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	*Conoco*				
Project Location:	*ESC #1E / Dhy Pit / T1 @ GW*				
Sampled by:	MKL	Date:	9/30/94	Time:	13:15
Analyzed by:	DLA	Date:	10/1/94		
Sample Matrix:	*Water*				

Aromatic Volatile Organics

Component	*Measured Concentration ug/L*	*Detection Limit Concentration ug/L*
Benzene	9,664	*0.2*
Toluene	33,648	*0.2*
Ethylbenzene	2,515	*0.2*
m,p-Xylene	30,459	*0.2*
o-Xylene	10,607	*0.2*
	TOTAL 86,893 ug/L	

ND - Not Detectable

Method *- SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:

Date: 10/3/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Michael K. Lane*	Date:	10/1/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample ID:*	*3363*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	*Conoco*				
Project Location:	*ESC #1E / Sep. Pit / T1 @ GW*				
Sampled by:	MKL	Date:	9/30/94	Time:	13:30
Analyzed by:	DLA	Date:	10/1/94		
Sample Matrix:	*Water*				

Aromatic Volatile Organics

Component	*Measured Concentration ug/L*	*Detection Limit Concentration ug/L*
Benzene	5,176	*0.2*
Toluene	12,423	*0.2*
Ethylbenzene	2,061	*0.2*
m,p-Xylene	10,746	*0.2*
o-Xylene	3,312	*0.2*
	TOTAL *33,719 ug/L*	

ND - Not Detectable

Method *- SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: [signature]

Date: 10/3/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3360*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E / Dhy. Pit / T1 Composite @ 3'-6'***				
Sampled by:	MKL	Date:	9/30/94	Time:	10:30
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3360-2150	*Conoco* ***ESC #1E / Dhy. Pit / T1 Composite @ 3'-6'***	12,750 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by:

Date: 10/3/94

OFF: (505) 325-8786

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3364*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E / Dhy. Pit / T1 @ 21'***				
Sampled by:	MKL	Date:	9/30/94	Time:	10:45
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	***Sample Identification***	***Total Petroleum Hydrocarbons***
3364-2150	*Conoco* ***ESC #1E / Dhy. Pit / T1 @ 21'***	220 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by:
Date: 10/3/94

P. O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3358*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E / Sep. Pit / T1 Composite 3'-9'***				
Sampled by:	MKL	Date:	9/30/94	Time:	11:30
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3358-2150	*Conoco* ***ESC #1E / Sep. Pit / T1 Composite 3'-9'***	3,850 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by:

Date: 10/3/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3359*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E / Sep. Pit / T2 @ 27'***				
Sampled by:	MKL	Date:	9/30/94	Time:	12:40
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3359-2150	*Conoco* ***ESC #1E / Sep. Pit / T2 @ 27'***	18 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by:

Date: 10/3/94

OFF: (505) 325-8786

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3360*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E / Dhy. Pit / T1 Composite @ 3'-6'***				
Sampled by:	MKL	Date:	9/30/94	Time:	10:30
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3360-2150	Conoco *ESC #1E / Dhy. Pit / T1 Composite @ 3'-6'*	12,750 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by: [signature]
Date: 10/3/94

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OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/3/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2150*
Address:	*657 W. Maple*	*Sample No.*	*3364*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	*Conoco*				
Project Location:	*ESC #1E / Dhy. Pit / T1 @ 21'*				
Sampled by:	MKL	Date:	9/30/94	Time:	10:45
Analyzed by:	DC	Date:	10/3/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3364-2150	*Conoco ESC #1E / Dhy. Pit / T1 @ 21'*	220 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by:

Date: 10/3/94

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786

LAB: (505) 325-5667

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 10/5/94

Internal QC No.: 0222-STD
Surrogate QC No.: 0223-STD
Reference Standard QC No.: 0300-STD

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes In Blank	<0.1 ppb

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	20	2	15%
Toluene	ppb	20	19	3	15%
Ethylbenzene	ppb	20	18	8	15%
m,p-Xylene	ppb	40	37	8	15%
o-Xylene	ppb	20	18	10	15%

Spike Results

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	100	102	(39-150)	2	20%
Toluene	95	96	(46-148)	0	20%
Ethylbenzene	99	98	(32-160)	0	20%
m,p-Xylene	101	102	(35-145)	1	20%
o-Xylene	99	103	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	S3 Percent Recovered
Limits	(70-130)		
3421-2172	94		

S1: Flourobenzene

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786 LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Michael Lane*	Date:	10/5/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2172*
Address:	*657 W. Maple*	*Sample ID:*	*3422*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E, Dehy Pit***				
Sampled by:	MKL	Date:	10/5/94	Time:	9:00
Analyzed by:	DLA	Date:	10/5/94		
Sample Matrix:	*Water*				

Aromatic Volatile Organics

Component	*Measured Concentration ug/L*	*Detection Limit Concentration ug/L*
Benzene	10,098	*0.2*
Toluene	18,949	*0.2*
Ethylbenzene	1,347	*0.2*
m,p-Xylene	9,714	*0.2*
o-Xylene	2,428	*0.2*
	TOTAL 42,536 ug/L	

ND - Not Detectable

Method *- SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: D-L
Date: 10/5/94

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Michael Lane*	Date:	10/5/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2172*
Address:	*657 W. Maple*	*Sample ID:*	*3421*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E, Sep. Pit***				
Sampled by:	MKL	Date:	10/5/94	Time:	8:40
Analyzed by:	DLA	Date:	10/5/94		
Sample Matrix:	*Water*				

Aromatic Volatile Organics

Component	*Measured Concentration ug/L*	*Detection Limit Concentration ug/L*
Benzene	10,929	*0.2*
Toluene	19,771	*0.2*
Ethylbenzene	932	*0.2*
m,p-Xylene	6,932	*0.2*
o-Xylene	1,815	*0.2*
	TOTAL 40,380 ug/L	

ND - Not Detectable

Method *- SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by:

Date: 10/5/94

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786 LAB: (505) 325-5667

TOTAL DISSOLVED SOLIDS ANALYSIS

Attn:	*Michael Lane*	Date:	10/6/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2172*
Address:	*657 W. Maple*	*Sample No.*	*3421*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E, Sep. Pit***				
Sampled by:	MKL	Date:	10/5/94	Time:	8:40
Analyzed by:	DLA	Date:	10/6/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Dissolved Solids*
3421-2172	*Conoco ESC #1E, Sep. Pit*	6,182 *mg/L*

Method - *Standard Methods Method 2540 C. Total Dissolved Solids Dried at 180C*

Approved by:
Date: 10/6/94

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ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786

LAB: (505) 325-5667

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 10/12/94

Internal QC No.: 0222-STD
Surrogate QC No.: 0223-STD
Reference Standard QC No.: 0300-STD

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes In Blank	<0.1 ppb

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	20	2	15%
Toluene	ppb	20	19	3	15%
Ethylbenzene	ppb	20	20	0	15%
m,p-Xylene	ppb	40	38	4	15%
o-Xylene	ppb	20	20	1	15%

Spike Results

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	101	100	(39-150)	0	20%
Toluene	103	103	(46-148)	0	20%
Ethylbenzene	100	99	(32-160)	1	20%
m,p-Xylene	97	101	(35-145)	3	20%
o-Xylene	103	100	(35-145)	3	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	S3 Percent Recovered
Limits	(70-130)		
3514-2186	99		

S1: Flourobenzene

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786 LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Michael Lane*	Date:	10/12/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2186*
Address:	*657 W. Maple*	*Sample ID:*	*3514*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E DP #3***				
Sampled by:	MKL	Date:	10/11/94	Time:	18:15
Analyzed by:	DLA	Date:	10/12/94		
Sample Matrix:	*Water*				

Aromatic Volatile Organics

Component	*Measured Concentration ug/L*	*Detection Limit Concentration ug/L*
Benzene	3.2	*0.2*
Toluene	5.4	*0.2*
Ethylbenzene	ND	*0.2*
m,p-Xylene	18.7	*0.2*
o-Xylene	0.2	*0.2*
	TOTAL 27.4 *ug/L*	

ND - Not Detectable

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DHC
Date: 10-12-94

ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-8786 LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	Michael Lane	Date:	10/12/94
Company:	On Site Technologies, Ltd.	Lab ID:	2186
Address:	657 W. Maple	Sample ID:	3515
City, State:	Farmington, NM 87401	Job No.	4-1127

Project Name:	Conoco				
Project Location:	ESC #1E DP #4				
Sampled by:	MKL	Date:	10/11/94	Time:	18:30
Analyzed by:	DLA	Date:	10/12/94		
Sample Matrix:	Water				

Aromatic Volatile Organics

Component	Measured Concentration ug/L	Detection Limit Concentration ug/L
Benzene	1,191	0.2
Toluene	2,122	0.2
Ethylbenzene	147	0.2
m,p-Xylene	756	0.2
o-Xylene	237	0.2
TOTAL	4,452 ug/L	

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: [signature]
Date: 10-12-94

OFF: (505) 325-8786

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:	*Michael Lane*	Date:	10/12/94
Company:	*On Site Technologies, Ltd.*	*Lab ID:*	*2186*
Address:	*657 W. Maple*	*Sample No.*	*3516*
City, State:	*Farmington, NM 87401*	*Job No.*	*4-1127*

Project Name:	***Conoco***				
Project Location:	***ESC #1E TH #6 (DP #4)***				
Sampled by:	MKL	Date:	10/11/94	Time:	13:45
Analyzed by:	DLA	Date:	10/12/94		
Type of Sample:	*Soil*				

Laboratory Analysis

Laboratory Identification	*Sample Identification*	*Total Petroleum Hydrocarbons*
3516-2186	*Conoco* ***ESC #1E TH #6 (DP #4)***	998 *mg/kg*

Method - *EPA Method 418.1 Total Petroleum Hydrocarbons*

Approved by: DLA
Date: 10-12-94

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Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Conoco Inc.

Project ID:	Erin Stays	Report Date:	05/16/95
Sample ID:	Erin Stays 1E DP 3	Date Sampled:	05/10/95
Lab ID:	G00442	Date Received:	05/10/95
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/16/95

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	2.9	0.4
Toluene	10.8	0.4
Ethylbenzene	2.1	0.4
m,p-Xylenes	4.1	0.4
o-Xylene	1.1	0.4

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	97.0	75 -125%

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

Comments:

Analyst

Review

Inter-Mountain Laboratories, Inc.
2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Conoco Inc.

Project ID:	Erin Stays	Report Date:	05/16/95
Sample ID:	Erin Stays 1E DP 4	Date Sampled:	05/10/95
Lab ID:	G00441	Date Received:	05/10/95
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	05/15/95

Target Analyte	Concentration (ppb)	Detection Limit (ppm)
Benzene	20,700	1.0
Toluene	31,600	1.0
Ethylbenzene	910	1.0
m,p-Xylenes	6,290	1.0
o-Xylene	1,580	1.0

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	82.6	75 -125%

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

Comments:

Analyst

Review

PIT CLOSURE DOCUMENTATION - SAMPLING RESULTS NOTES

LOCATION OF PIT: ERIN STAYS 1E

TYPE OF PIT: DHP & SEP

	SAMPLE EVENT # 1	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #	SAMPLE EVENT #
DESCRIPTION OF SAMPLE								
DATE OF SAMPLE	10/16/95							
LOCATION OF SAMPLE	LANDFARM							
TYPE OF SAMPLE: (GRAB/COMPOSITE)	9 PT. COMPOSITE							
DEPTH OF SAMPLE(S)	0 - 6"							
TEMPERATURE OF SAMPLE	74°							
FIELD METHOD RESULTS (PPMS)								
TPH VAPORS (EQUIV UNITS)	ND							
BENZENE RESPONSE FACTOR	.47							
ADJUSTED FOR BENZENE EQUIV UNITS	0							
LAB RESULTS IN PPM:								
METHOD (418.1 OR MOD 8015)	418.1							
TPH	38							
NOTES	PULLED 9 PT. COMPOSITE ON LANDFARM AREA.							

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 418.1

Conoco, Inc.

Project: Not Given
Matrix: Soil
Condition: Intact/Cool

Date Reported: 11/07/95
Date Sampled: 10/16/95
Date Received: 10/16/95
Date Extracted: 10/24/95
Date Analyzed: 10/24/95

Sample ID	Lab ID	Result (mg/kg)	Detection Limit (mg/kg)
Erin Stays 1E Landfarm	0395G01909	38	10

ND - Analyte not detected at stated detection level.

References:

Method 418.1: Petroleum Hydrocarbons, Total Recoverable, USEPA Chemical Analysis of Water and Waste, 1978.

Method 3550: Ultrasonic Extraction of Non-Volatile and Semi-Volatile Organic Compounds from Solids, USEPA SW-846, Rev. 1, July 1992.

Reported by: _____ Reviewed: _____

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Conoco, Inc.

Project ID:	Water-BTEX	Report Date:	11/07/95
Sample ID:	Erin Stays 1E DP 3	Date Sampled:	10/23/95
Lab ID:	0395G01969	Date Received:	10/24/95
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	10/31/95

Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	29.6	2.0
Toluene	67.6	2.0
Ethylbenzene	4.3	2.0
m,p-Xylenes	17.1	2.0
o-Xylene	4.7	2.0

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	85.6	75 -125%

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

Comments:

Analyst

Review

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

VOLATILE AROMATIC HYDROCARBONS

Conoco, Inc.

Project ID:	Water-BTEX	Report Date:	11/07/95
Sample ID:	Erin Stays 1E DP 4	Date Sampled:	10/23/95
Lab ID:	0395G01968	Date Received:	10/24/95
Sample Matrix:	Water	Date Extracted:	NA
Condition:	Cool/Intact	Date Analyzed:	10/31/95

Target Analyte	Concentration (ppb)	Detection Limit (ppm)
Benzene	29,000	2.0
Toluene	38,100	2.0
Ethylbenzene	1,110	2.0
m,p-Xylenes	6,900	2.0
o-Xylene	2,020	2.0

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Bromofluorobenzene	85.7	75 -125%

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

Comments:

Analyst

Review