3R - 321

REPORTS

DATE:

April 22, 2005

RECEIVED
3RP 321

MAY 11 2005

Oil Conservation Division
Environmental Bureau

Environmental Projects
188 County Road 4900
Bloomfield, NM 87413
505-634-4956 Phone
505-632-4780 Fax

April 22, 2005

Mr. Glen Von Gonten
Hydrogeologist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: HONOLULU LINE DRIP PIT REMEDIATION AND CLOSURE REPORT

Dear Mr. Von Gonten:

Enclosed please find information on remediation and closure activities associated with the unlined surface impoundment located at the Honolulu Line Drip. Public Service Company of New Mexico (PNM) was previously responsible for the site and initiated pit closure activities on June 4, 1996. The site later became the responsibility of Williams upon purchase of Gas Company of New Mexico (GCNM) from PNM. Upon expiration of PNM's retained environmental liabilities associated with this site, Williams agreed to complete necessary closure work. As such, the enclosed documentation reflects activities of both PNM and Williams, all of which has been previously reported.

Site History

Excavation of petroleum hydrocarbon impacted soil beneath the unlined surface impoundment began on June 4, 1996. An approximate total of 646 cubic yards of contaminated soil were removed and sent to an off-site landfarm. The excavation was reportedly terminated at a depth of 8 feet. At that time, ground water was discovered at 5.5 feet below ground surface. A sample of the ground water collected from the excavation contained benzene, toluene and total xylene at concentrations in excess of Water Quality Control Commission (WQCC) standards. A letter notifying the Oil Conservation Division (OCD) of ground water contamination at the site was submitted on June 24, 1996.

To evaluate the magnitude and extent of ground water contamination, monitoring wells were installed in and around the former pit location. A down gradient well was installed consistent with standard site investigation protocol. The depth and location of wells were approved by NMOCD. Ground water samples were collected from the monitoring wells and PNM decided to excavate additional soil. On September 17, 1996, PNM returned to the site and excavated an additional 230 cubic yards of soil. Additional monitoring wells were installed to replace one that was destroyed and to further define the downgradient extent of ground water impact. Again, following approximately seven quarters of monitoring, PNM excavated additional hydrocarbon impacted soils. Beginning on December 1, 1998, PNM removed more than 5000 cubic yards of soil and sent it to a nearby Jicarilla Apache landfarm.

Site Hydrogeology

The Honolulu Line Drip site lies at an elevation of about 7000 feet, on the southern edge of Tapicito Wash. Tapicito is a tributary to Largo Wash (Largo Canyon), in the far southeast part of its drainage area. Near surface drainage and ground water flow is southwesterly. Underlying soils at the site are predominantly silty sand to well sorted fine sands. Ground water is generally found at about 7 feet with seasonal variations of two feet or more.

Monitoring Results

Concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) were analyzed in water samples collected over a six year period following the last excavation work and installation of the existing monitoring network. Of the six wells in the current monitoring network, only water from MW-12 was ever measured more than once to have contamination above WQCC MCLs after the second quarter of 2001. During the last five monitoring events, benzene levels in MW-12 have been below WQCC standards. Table 1 summarizes the analytical results from sampling of all monitoring wells. As reported previously, MW-8 has not been sampled recently due to an obstruction in the well. Laboratory results reports for 2004 were included in the 2004 Annual Summary Report submitted under separate cover and are thus not included herein.

Summary

The unlined surface impoundment at the Honolulu Line Drip was addressed consistent with OCD Order 7940-C and with the guidelines pertaining to the remediation of unlined surface impoundments. The work included the removal of hydrocarbon impacted soils and an evaluation of groundwater impacted by the historical operation of the impoundment. A network of ground water monitoring wells was installed and ground water analyses showed that a small BTEX plume existed in the vicinity of the former pit location. Natural attenuation of the BTEX compounds resulted in contaminant degradation to concentrations less than WQCC MCLs. The monitoring results show that there have been no exceedances of WQCC standards for BTEX in ground water for a period of four consecutive quarters.

Based on current site conditions, Williams requests approval for closure of the Honolulu Line Drip site. Following receipt of your closure approval we will plug and abandon the monitoring wells in accordance with applicable guidelines. Williams appreciates your time in reviewing this site closure request. If you have any questions or require any additional information, please contact me at 505-634-4956.

Respectfully,

Mark Harvey
Project Coordinator

enclosures

c: Mr. Denny Foust, OCD District III, Aztec
Mr. Bill Liess, BLM Farmington District Office

Analytical Data Summary

Site Name:
Honolulu Drip

Reporting Period:
9/1/96 To 4/1/05

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	2/19/01	173119FEB01	<1.0	<1.0	<1.0	<1.0
	5/2/01	110602MAY01	<1	<1	<1	<1
	11/1/01	134001NOV01	<1.0	<2.0	<2.0	<2.0
	3/29/02	112629MAR02	ND	ND	ND	ND
	6/18/02	072718JUN02	ND	ND	ND	ND
	9/27/02	094327SEP02	ND	ND	ND	ND
	12/12/02	143612DEC02	ND	ND	ND	ND
	3/13/03	141613MAR03	ND	ND	ND	ND
	6/3/03	081203JUN03	ND	ND	ND	ND
	9/19/03	113419SEP03	ND	ND	ND	ND
	3/12/04	164612MAR04	ND	ND	ND	ND
MW-12						
	2/13/01	115813FEB01	6.91	2.03	<1	<1
	5/2/01	110102MAY01	8.86	1.86	<1	<1
	11/1/01	134601NOV01	3.9	<2.0	<2.0	<2.0
	3/29/02	113229MAR02	ND	ND	ND	ND
	6/18/02	082418JUN02	92.	ND	3.3	20.
	9/27/02	105927SEP02	100	ND	3.8	20.
	12/12/02	145712DEC02	4.1	ND	ND	ND
	3/13/03	151113MAR03	2.1	ND	ND	ND
	6/3/03	082303JUN03	31.	ND	ND	6.2
	9/19/03	131819SEP03	14.	ND	ND	ND
	12/14/03	121314DEC03	9.1	ND	ND	ND
	3/12/04	173012MAR04	6.8	ND	ND	ND
	7/1/04	120601JUL04	6.7	ND	ND	ND
	9/19/04	101119SEP04	3.9	ND	ND	ND
	12/4/04	155504DEC04	ND	ND	ND	ND

Site Name:
Honolulu Drip

Reporting Period:
9/1/96 To 4/1/05

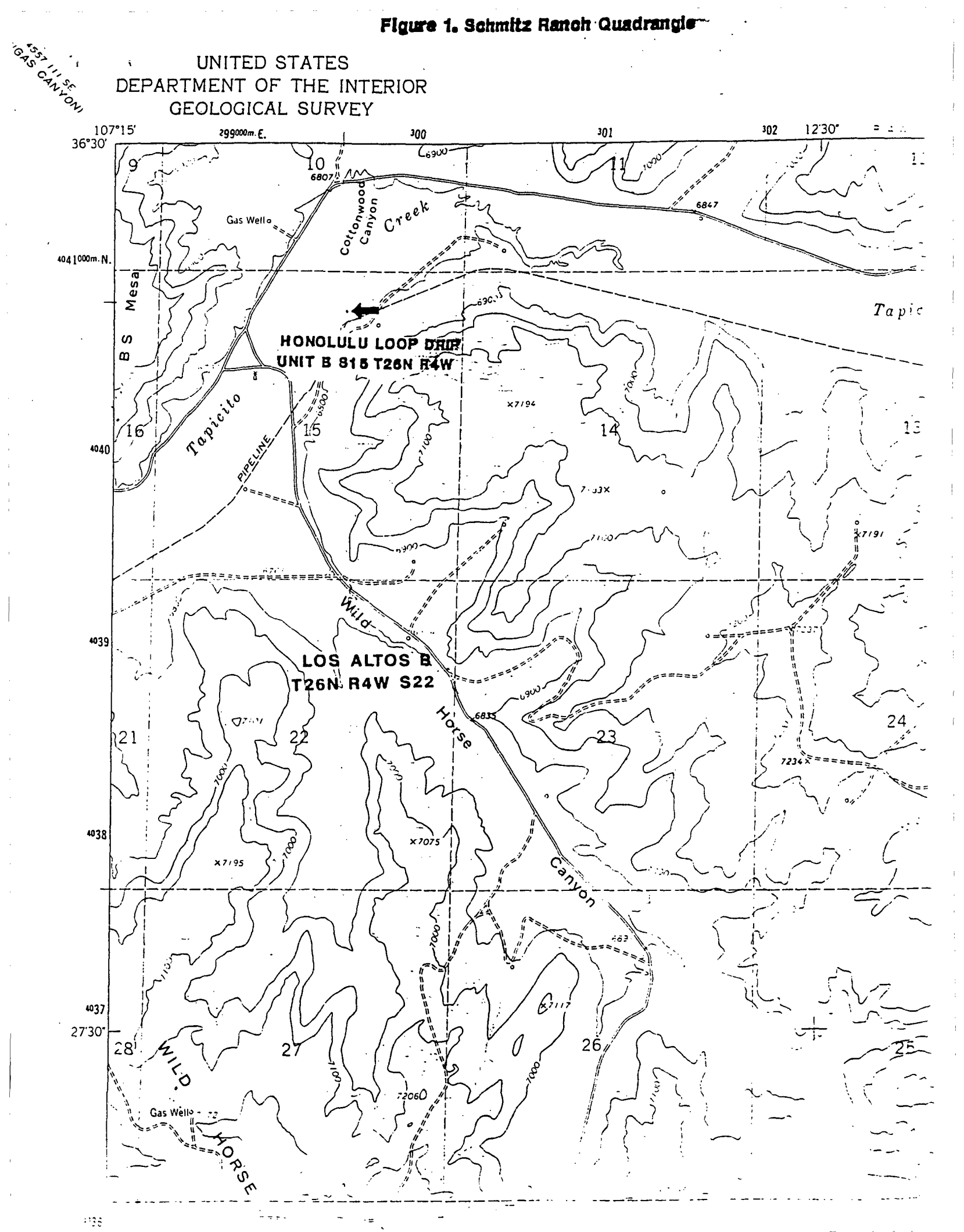
Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-13						
	2/13/01	120413FEB01	3.21	<1	<1	<1
	5/2/01	114302MAY01	4.28	<1	<1	2.31
	11/1/01	135301NOV01	<1.0	<2.0	<2.0	<2.0
	3/29/02	113429MAR02	ND	ND	ND	ND
	6/18/02	081618JUN02	ND	ND	ND	ND
	9/27/02	104927SEP02	ND	ND	ND	ND
	12/12/02	145012DEC02	ND	ND	ND	ND
	3/13/03	145813MAR03	ND	ND	ND	ND
	6/3/03	083303JUN03	ND	ND	ND	ND
	9/19/03	130919SEP03	53.	2.9	120	830
	12/14/03	120514DEC03	ND	ND	ND	ND
	3/12/04	172112MAR04	ND	ND	ND	ND
	7/1/04	115801JUL04	ND	ND	ND	ND
	9/19/04	095719SEP04	ND	ND	ND	ND
	12/4/04	154404DEC04	ND	ND	ND	ND
MW-5						
	2/13/01	121113FEB01	79.0	<1	<1	<1
	5/2/01	111102MAY01	197	<1	<1	2.07
	11/1/01	140001NOV01	<1.0	3.3	<2.0	<2.0
	3/29/02	113729MAR02	ND	ND	ND	ND
	6/18/02	080718JUN02	ND	ND	ND	ND
	9/27/02	103727SEP02	ND	ND	ND	ND
	12/12/02	144512DEC02	ND	ND	ND	ND
	3/13/03	145013MAR03	ND	ND	ND	ND
	6/3/03	084403JUN03	ND	ND	ND	ND
	9/19/03	125919SEP03	ND	ND	ND	ND
	12/14/03	115714DEC03	ND	ND	ND	ND
	3/12/04	170412MAR04	ND	ND	ND	ND
	7/1/04	114701JUL04	ND	ND	ND	ND
	9/19/04	094219SEP04	ND	ND	ND	ND
	12/4/04	153304DEC04	ND	ND	ND	ND

Site Name:
Honolulu Drip

Reporting Period:
9/1/96 To 4/1/05

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-7						
	2/13/01	122013FEB01	2.86	<1	<1	1.63
	5/2/01	111902MAY01	5.49	<1	<1	<1
	11/1/01	140401NOV01	<1.0	<2.0	<2.0	<2.0
	3/29/02	114129MAR02	ND	ND	ND	ND
	6/18/02	074018JUN02	ND	ND	ND	ND
	9/27/02	102627SEP02	ND	ND	ND	ND
	12/12/02	143912DEC02	ND	ND	ND	ND
	3/13/03	144013MAR03	ND	ND	ND	ND
	6/3/03	085603JUN03	ND	ND	ND	ND
	9/19/03	125119SEP03	ND	ND	ND	ND
	12/14/03	114714DEC03	ND	ND	ND	ND
	3/12/04	165712MAR04	ND	ND	ND	ND
	7/1/04	113601JUL04	ND	ND	ND	ND
	9/19/04	093419SEP04	ND	ND	ND	ND
MW-8						
	9/19/03	123819SEP03	ND	ND	ND	ND
	12/14/03	113514DEC03	ND	ND	ND	ND

Figure 1. Schmitz Ranch Quadrangle



Public Service Company
of New Mexico
Alvarado Square MS. 0408
Albuquerque, NM 87158

June 24, 1996

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: NOTIFICATION OF GROUNDWATER CONTAMINATION AT THE HONOLULU LINE DRIP

Dear Bill:

Pursuant to New Mexico Water Quality Control Commission (WQCC) Regulations, section 1-203, PNM hereby provides written notification of groundwater contamination at the Honolulu Line Drip located on the Jicarilla Apache Reservation in section 25, township 26N, range 4W, unit letter B. This letter follows verbal notification provided to you on Tuesday, June 18, 1996 (M. Gannon, PNM to B. Olson, OCD, 6/18/96). On June 4, 1996, field personnel collected samples from groundwater in an excavation underneath the former pit location. At the time of excavation, groundwater was encountered at approximately 7 feet below ground surface. Groundwater samples were delivered to OnSite Technologies, Ltd., in Farmington, New Mexico, for laboratory analysis. Analytical results are provided below:

Component	Units	WQCC Stds.	Excavation Underneath Pit
Benzene	ppb	10	**1,921.4**
Toluene	ppb	750	**5,671.0**
Ethylbenzene	ppb	750	173.3
Xylenes	ppb	620	**2,678.70**

Boldtype indicates a WQCC exceedance.

A hardcopy of the analytical results are attached.

PNM will conduct further actions at the Honolulu Line Drip pursuant to PNMGS Groundwater Management Program: Unlined Surface Impoundment Closures approved by OCD in May of 1996. If you have any questions regarding the contents of this letter, please call me at (505) 241-2974.

Sincerely,
PNM

Maureen D. Gannon
Project Manager

MDG/LULU01.LTR

Attachment

cc: Colin Adams, PNM
Denver Bearden, PNMGS
Denny Foust, OCD-Aztec Office
Leigh Gooding, WFS
Keith Manwell, Jicarilla Apache EPO
Toni Ristau, PNM

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	8-Jun-96
Company:	*PNM Gas Services*	*COC No.:*	*4676*
Address:	*Alevardo Square, Mail Stop 0408*	*Sample No.*	*11116*
City, State:	*Albuquerque, NM 87158*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - Honolulu Loop Line Drip***				
Project Location:	***9606041245***				
Sampled by:	RD	Date:	4-Jun-96	Time:	12:45
Analyzed by:	DC	Date:	7-Jun-96		
Sample Matrix:	*Water*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	1921.4	ug/L	0.2	ug/L
Toluene	5671.0	ug/L	0.2	ug/L
Ethylbenzene	173.3	ug/L	0.2	ug/L
m,p-Xylene	2137.3	ug/L	0.2	ug/L
o-Xylene	541.4	ug/L	0.2	ug/L
TOTAL	10444.4	ug/L		

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

Approved by: DaG

Date: 6/8/96

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	8-Jun-96
Company:	*PNM Gas Services*	*COC No.:*	*4676*
Address:	*Alevardo Square, Mail Stop 0408*	*Sample No.*	*11117*
City, State:	*Albuquerque, NM 87158*	*Job No.*	*2-1000*

Project Name:	***PNM Gas Services - Honolulu Loop Line Drip***				
Project Location:	***9606041248***				
Sampled by:	RD	Date:	4-Jun-96	Time:	12:48
Analyzed by:	DC	Date:	7-Jun-96		
Sample Matrix:	*Water*				

Laboratory Analysis

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	1793.0	ug/L	0.2	ug/L
Toluene	5426.5	ug/L	0.2	ug/L
Ethylbenzene	200.4	ug/L	0.2	ug/L
m,p-Xylene	2074.3	ug/L	0.2	ug/L
o-Xylene	520.4	ug/L	0.2	ug/L
TOTAL	10014.6	ug/L		

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

Approved by: DcG

Date: 6/8/96

ON SITE
TECHNOLOGIES, LTD.

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

Date Analyzed: 7-Jun-96

Internal QC No.: 0444-STD
Surrogate QC No.: 0445-STD
Reference Standard QC No.: 0355-STD

Method Blank

Analyte	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Analyte	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	19.9	1	15%
Toluene	ppb	20.0	20.3	1	15%
Ethylbenzene	ppb	20.0	20.3	2	15%
m,p-Xylene	ppb	40.0	40.1	0	15%
o-Xylene	ppb	20.0	19.9	0	15%

Matrix Spike

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	103	96	(39-150)	5	20%
Toluene	104	98	(46-148)	4	20%
Ethylbenzene	104	97	(32-160)	5	20%
m,p-Xylene	102	95	(35-145)	5	20%
o-Xylene	99	93	(35-145)	5	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)	
11115-4675	100	

S1: Flourobenzene

CHAIN OF CUSTODY RECORD

4676

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 6-4-96

Page 1 of 1

ATTN: Ron & Roy

Purchase Order No.: | Job No.

SEND INVOICE TO

Name: Denver Bearden
Company: PNM Gas Services | Dept. 324-3763
Address: 603 W. Elm Street
City, State, Zip: Farmington, NM 87401

REPORT RESULTS TO

Name: Maureen Gannon | Title
Company: PNM Gas Services
Mailing Address: Alverado Square, Mail Stop 0408
City, State, Zip: Albuquerque, NM 87158
Telephone No.: 505-848-2974 | Telefax No.

Sampling Location: Honolulu Loop Line Drip

Sampler: R. Dedrick

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED: BTEX 8020	LAB ID
960604 1245	6/4/96	1245	H_2O	$HgCl_2$	1	X	11116-4676
960604 1248	6/4/96	1248	H_2O	$HgCl_2$	1	X	11117-4676

Relinquished by: Ronald A Dedrick | Date/Time 6/6/96 0800 | Received by: Ry Burnham | Date/Time 6.6.96.0800
Relinquished by: | Date/Time | Received by: [signature] | Date/Time 6/6/96 1621
Relinquished by: | Date/Time | Received by: | Date/Time

Method of Shipment:

Authorized by: Ry Burnham (Client Signature Must Accompany Request) Date 6.6.96

Rush | 24-48 Hours | 10 Working Days

Special Instructions:
Results to be sent to both parties.

Unlined Surface Impoundment Assessment Form

Site Information:

Well Name:	Honolulu Loop Line South Tapacito Drip			
Operator:	Williams			
Legal Description:	Sec: 15	Twn: 26N	Rng: 4W	Unit:

Vulnerable Area: ☐ Original ☐ Expanded ☐ Extended ☑ Other JIC.

Date: 4/24/96 Time: 1237 AM/PM

Well Pad Dimensions: L 50 W 50

Data Sheet #: 2605

Canyon: Tapacito

Quad Map (#): Schmitz Ranch

County: Rio Arriba

Run #: 12-51

Pit Information:

PNM Pit: ☑ Yes ☐ No

☐ Active ☐ SAT

☑ Abandoned ☐ Inaccessible

L 19 W 9 D 3

PNM Equipment: ☑ Yes ☐ No

Tank Set: ☑ Yes ☐ No

Discharges to Pit:

☐ SEP ☐ DH ☐ DR ☑ None

Ref: WH ☐ Other _____

Distance from Ref. _____

Degrees: _____

OVM 755 ppm

Testhole Depth 8'

Soil Desc. Brown

Lab Sample: ☐ Yes ☑ No Sample #(s): _____ COC#: _____

Geographical:

Geology: ☐ SS ☑ Clay ☐ Sand ☐ Outcrop ☐ Rock ☐ Gravel ☐ Cliffs ☐ Silt ☐ Other _____

Terrain: ☐ Mesa Top ☐ Trailing Slope ☑ River Bottom ☐ Other _____

Land Use: ☑ Grazing ☐ Residential ☑ Recreation ☐ Other _____

Land Type: ☐ BLM ☐ State ☐ Fee ☑ Other JIC

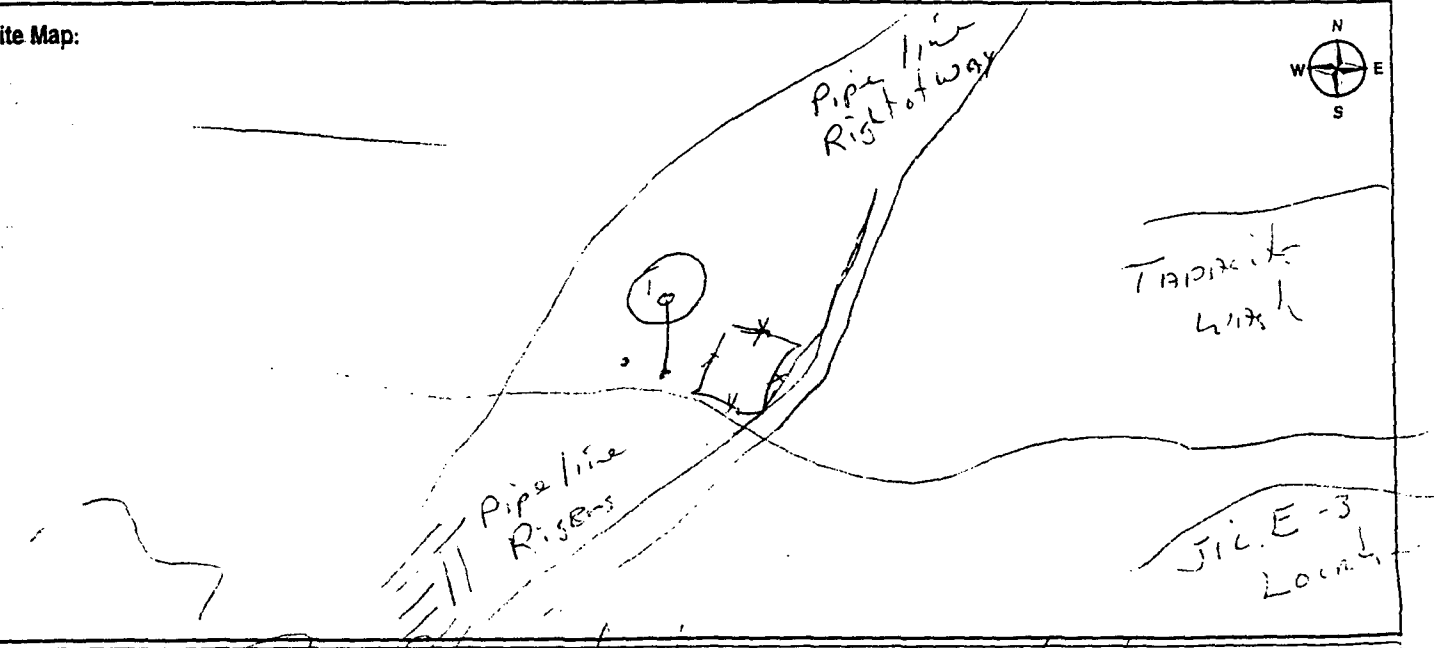
Vegetation: Well Pad ☑ Normal ☐ Stressed ☐ None; Area ☑

Ranking:

Depth to Groundwater: (Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or less than 1,000 feet from all other water sources)	Yes (20 points) No (0 points)	0
Distance to Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals, and ditches)	Less than 200 feet (20 points) 200 feet to 1,000 feet (10 points) Greater than 1,000 feet (0 points)	20
Distance to Ephemeral Stream (dry wash): (Horizontal distance to all downgradient streams having a width of at least 10 feet) *Jicarilla only*	Less than or equal to 100 feet (10 points) Greater than 100 feet (0 points)	10
Distance to Nearest Lake, Playa, or Watering Pond: (Horizontal distance to all downgradient lakes, playas, and livestock or wildlife water ponds) *Jicarilla only*	Less than or equal to 100 feet (10 points) Greater than 100 feet (0 points)	0

General Comments: Bottom of Tapacito wash

Site Map:



Assessor's Signature: Randall R. Deckert Date: 4/24/96

RAY,
Keith said we could backfill this pit.

JICARILLA APACHE TRIBE

ENVIRONMENTAL PROTECTION OI

P.O. BOX 507
DULCE, NEW MEXICO 87528

PIT REMEDIATION AND CLOSURE

Operator: PNM Gas Services (WFS)

Address: 603 W. Elm Street Farmington, NM 87401

Facility or Well Name: Honolulu Loop Drip

Location: Unit B Sec 15 T 26 N R 4 W County Rio Arriba

Pit Type: Separator ☐ Dehydrator ☐ Other Manual drip blowdown riser.

Land Type: Jicarilla Apache

Pit Location: (Attach diagram)

Pit dimensions: Length 18 ' Width 18 ' Depth 3 '

Reference: Wellhead ☐ Other Manual drip blowdown riser.

Footage from reference: 36'

Direction from reference: 25 degrees ☑ East ☐ North or ☐ West ☑ South

Depth to Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)	20
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)	Yes No	(20 points) (0 points)	0
Distance to Surface Water: (Horizontal distance to perrenial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet 200 feet to 1,000 feet Greater than 100 feet	(20 points) (10 points) (0 points)	0
Distance to Ephemeral Stream (dry wash): (Horizontal distance to all downgradient streams having a width of at least 10 feet)	Less than or equal to 100 feet Greater than 100 feet	(10 points) (0 points)	10
Distance to Nearest Lake, Playa, or Watering Pond: (Horizontal distance to all downgradient lakes, playas, and livestock or wildlife water ponds)	Less than or equal to 100 feet Greater than 100 feet	(10 points) (0 points)	0

RANKING SCORE (TOTAL POINTS) : 30

Date Remediation Started: 12/1/98 **Date Completed:** _____

Remediation Method: Excavation [☑] Approx. Cubic Yards 7058

(Check all appropriate sections) Landfarmed [☑] Amount Landfarmed (cubic yds) 5000

Other Approximately 2058 yds. was clean overburden, will use as backfill.

Remediation Location: Onsite [☐] Offsite Sent approximately 5000 yds. to Jicarilla LF #6.

(i.e., landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action:
Removal of contaminated soil from all four sidewalls, and bottom, as to get a below 100 ppm head space reading. Bottom is at water level, there is a a very tight clay, which appears almost impermeable.

Ground Water Encountered: No [☐] Yes [☑] Depth 5'

Final Pit Closure Sampling: Sample Location Three point composites of North and South sidewalls and bottom, and one point samples of East and West walls.

(If multiple samples, attach sample result and diagram of sample locations and depths.)

Sample depth 10'

Sample date 12/15/98 Sample time 1020

Sample Results

Soil: Benzene (ppm) ND **Water:** Benzene (ppb) _____

Total BTEX (ppm) ND Toluene (ppb) _____

Field headspace (ppm) 729 Ethylbenzene (ppb) _____

TPH (ppm) ND Method 8015 Total Xylenes (ppb) _____

Vertical Extent (ft) 10' *Risk Analysis form attached:* Yes [☐] No [☑]

Ground Water Sample: Yes [☐] No [☑] (If yes, see attached Groundwater Site Summary Report)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND MY BELIEF.

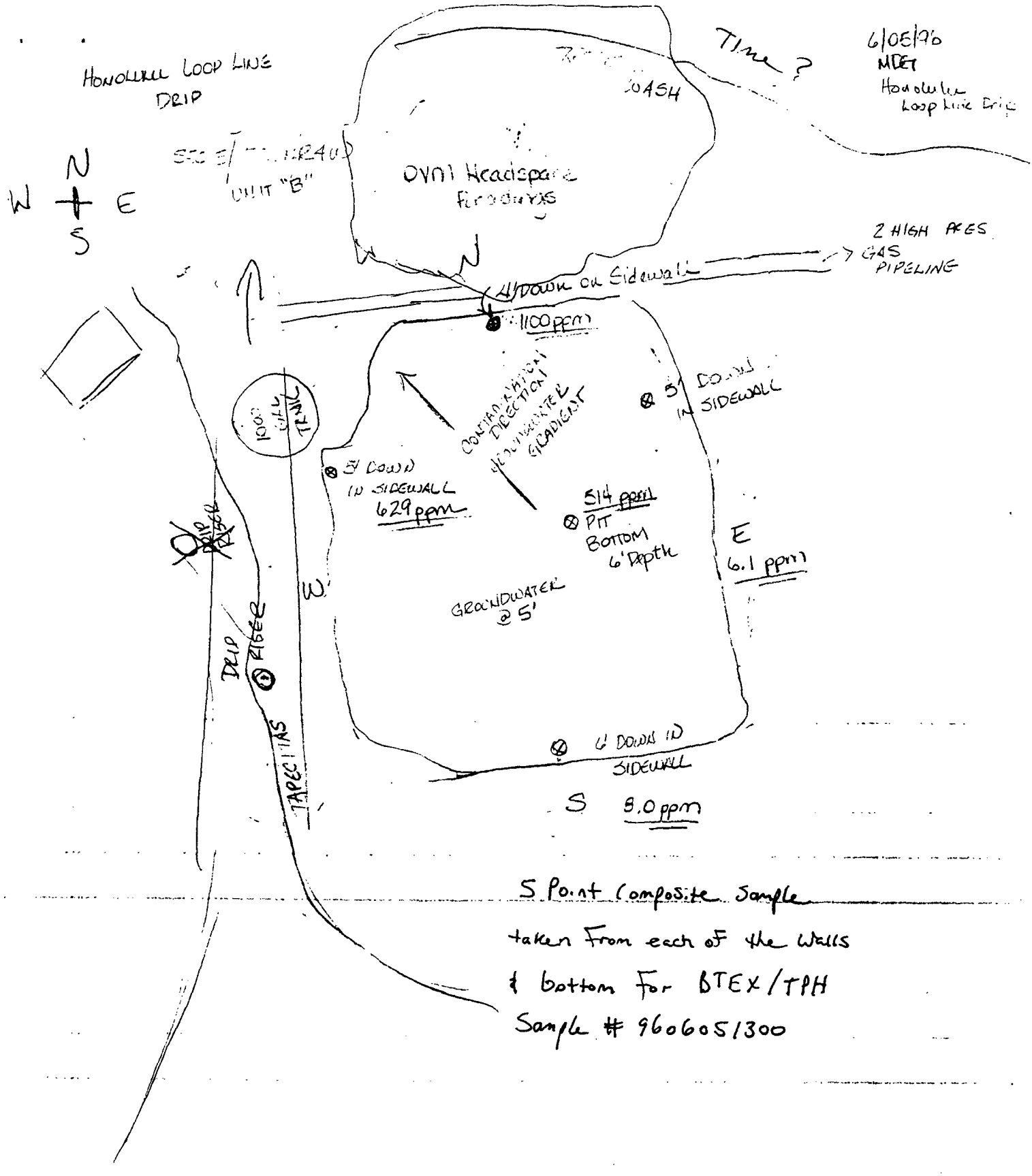
DATE: 12-20-98 PRINTED NAME Ray Haston

SIGNATURE Ray Haston TITLE Environmental Tech. III

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE:

APPROVED: YES _____ NO _____ (REASON): _____

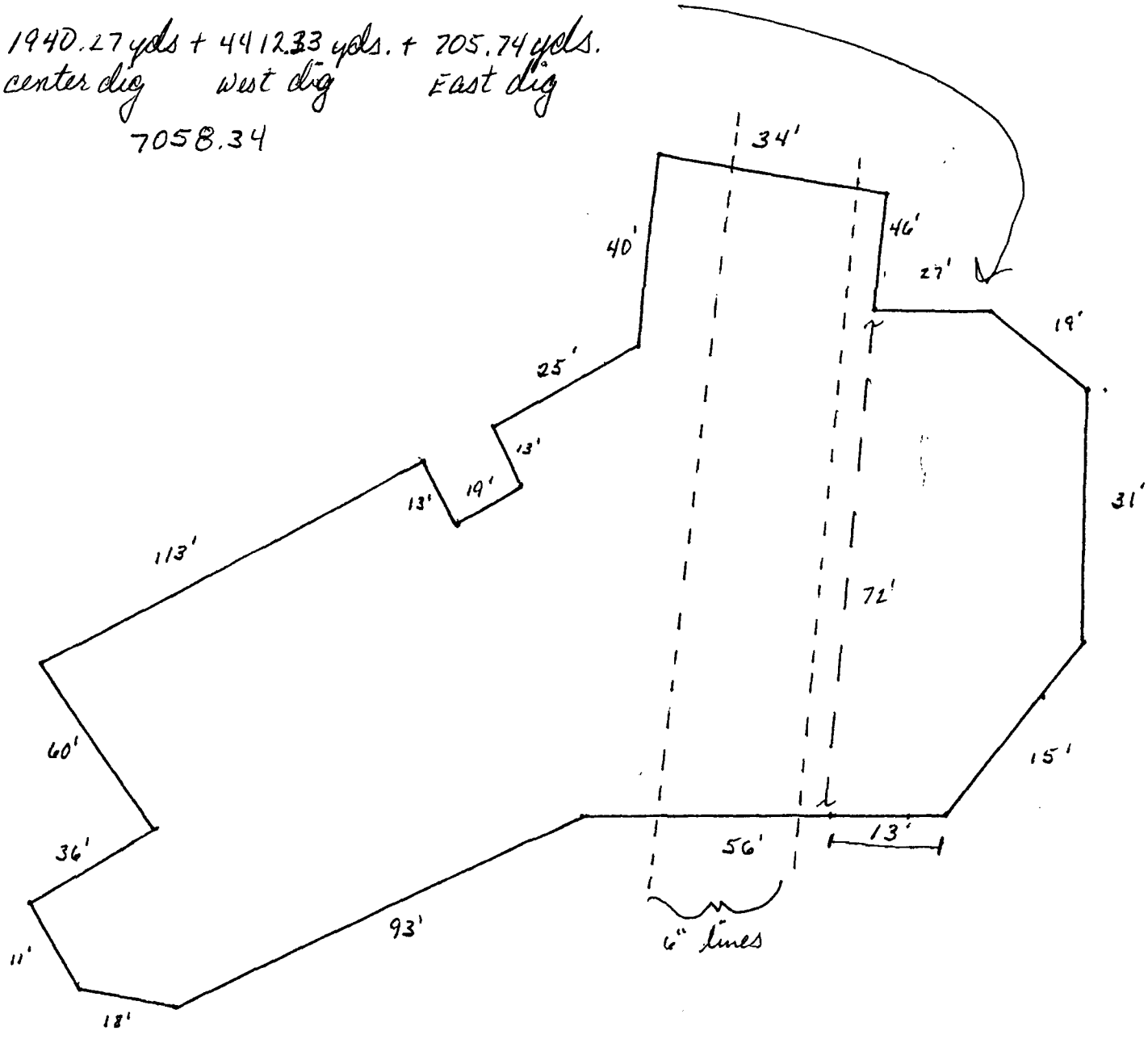
SIGNATURE: _____ DATE: _____



5 Point Composite Sample
taken From each of the Walls
& bottom For BTEX/TPH
Sample # 960605/300

Honolulu Loop Drip
(B) 15-26N-4W
WFS
12-15-98
East excavation $51.5'(N+S) \times 37'(E+W) \times 10'(D) = \frac{19055}{27} = 705.74$

1940.27 yds + 4412.33 yds. + 705.74 yds.
center dig west dig East dig
7058.34



not to scale

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

December 22, 1998

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: ~~Jicarilla Pit Remediation~~ Honolulu Loop Drip Order No.: 9812043

Dear Maureen Gannon,

On Site Technologies, LTD. received 2 samples on 12/15/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
BTEX (SW8021B)
Diesel Range Organics (SW8015)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *22-Dec-98*

CLIENT: PNM - Public Service Company of NM
Project: Jicarilla Pit Remediation
Lab Order: 9812043

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *22-Dec-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Honolulu Loop Drip
Work Order:	9812043	**Client Sample ID:**	9812151015; 4 Wall Comp
Lab ID:	9812043-01A **Matrix:** SOIL	**Collection Date:**	12/15/98 10:15:00 AM
Project:	Jicarilla Pit Remediation	**COC Record:**	5779

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	12/21/98
BTEX		**SW8021B**				Analyst: **HR**
Benzene	ND	1		µg/Kg	1	12/21/98
Toluene	ND	2		µg/Kg	1	12/21/98
Ethylbenzene	ND	1		µg/Kg	1	12/21/98
m,p-Xylene	ND	2		µg/Kg	1	12/21/98
o-Xylene	ND	1		µg/Kg	1	12/21/98

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

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ANALYTICAL REPORT

Date: *22-Dec-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Honolulu Loop Drip
Work Order:	9812043	**Client Sample ID:**	9812151020; 3pt Bottom Comp
Lab ID:	9812043-02A **Matrix:** SOIL	**Collection Date:**	12/15/98 10:20:00 AM
Project:	Jicarilla Pit Remediation	**COC Record:**	5779

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	2	12/21/98
BTEX		**SW8021B**				Analyst: **HR**
Benzene	ND	1		µg/Kg	1	12/21/98
Toluene	ND	2		µg/Kg	1	12/21/98
Ethylbenzene	ND	1		µg/Kg	1	12/21/98
m,p-Xylene	ND	2		µg/Kg	1	12/21/98
o-Xylene	ND	1		µg/Kg	1	12/21/98

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

December 17, 1998

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Honolulu Loop Drip

Order No.: 9812011

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 12/4/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
BTEX (SW8020A)
Diesel Range Organics (SW8015)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Project: Honolulu Loop Drip
Lab Order: 9812011

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *17-Dec-98*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Honolulu Loop Drip
Work Order:	9812011	**Client Sample ID:**	9812040835; S. Wall Sample
Lab ID:	9812011-01A **Matrix:** SOIL	**Collection Date:**	12/4/98 8:35:00 AM
Project:	Honolulu Loop Drip	**COC Record:**	5778

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	130	50		mg/Kg	2'	12/16/98
BTEX		**SW8020A**				Analyst: **HR**
Benzene	4600	200		µg/Kg	200	12/14/98
Toluene	ND	400		µg/Kg	200	12/14/98
Ethylbenzene	3300	200		µg/Kg	200	12/14/98
m,p-Xylene	26000	400		µg/Kg	200	12/14/98
o-Xylene	5600	200		µg/Kg	200	12/14/98

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Method Blank

Sample ID: **MBlank** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/14/98** Prep Date: **12/14/98**

Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	19.31	25									J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **9812019-03AD** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/16/98** Prep Date: **12/15/98**

Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9562**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	1597	25	0	0	0.0%	0	0	1868	15.6%	15	R

√ 12/17/98

12/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: **9812019-02AMS** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/16/98** Prep Date: **12/15/98**

Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	508.3	25	501.9	0	101.3%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/14/98** Prep Date: **12/14/98**

Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9540**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	538.1	25	501.9	19.31	103.4%	70	130				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV CCV1 DRO_**	Batch ID: **8015DR2_S-1**	Test Code: **SW8015**	Units: **mg/Kg**		Analysis Date **12/14/98**			Prep Date:		
Client ID:	**9812011**	Run ID:	**GC-2_981216A**		SeqNo:	**9539**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	490.2	25	501.9	0	97.7%	85	115				

Sample ID: **CCV CCV2 DRO_**	Batch ID: **8015DR2_S-1**	Test Code: **SW8015**	Units: **mg/Kg**		Analysis Date **12/14/98**			Prep Date:		
Client ID:	**9812011**	Run ID:	**GC-2_981216A**		SeqNo:	**9563**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	514	25	501.9	0	102.4%	85	115				

Sample ID: **CCV CCV3 DRO_**	Batch ID: **8015DR2_S-1**	Test Code: **SW8015**	Units: **mg/Kg**		Analysis Date **12/15/98**			Prep Date:		
Client ID:	**9812011**	Run ID:	**GC-2_981216A**		SeqNo:	**9564**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	498.9	25	501.9	0	99.4%	85	115				

Sample ID: **CCV CCV4 DRO_**	Batch ID: **8015DR2_S-1**	Test Code: **SW8015**	Units: **mg/Kg**		Analysis Date **12/15/98**			Prep Date:		
Client ID:	**9812011**	Run ID:	**GC-2_981216A**		SeqNo:	**9565**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	528.8	25	501.9	0	105.4%	85	115				

Sample ID: **CCV CCV5 DRO_**	Batch ID: **8015DR2_S-1**	Test Code: **SW8015**	Units: **mg/Kg**		Analysis Date **12/15/98**			Prep Date:		
Client ID:	**9812011**	Run ID:	**GC-2_981216A**		SeqNo:	**9566**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	531.3	25	501.9	0	105.9%	85	115				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV CCV6 DRO_** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/16/98** Prep Date:
Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9567**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	439	25	501.9	0	87.5%	85	115				

Sample ID: **CCV CCV7 DRO_** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/16/98** Prep Date:
Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	519.8	25	501.9	0	103.6%	85	115				

Sample ID: **CCV CCV8 DRO_** Batch ID: **8015DR2_S-1** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **12/16/98** Prep Date:
Client ID: **9812011** Run ID: **GC-2_981216A** SeqNo: **9569**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	506.7	25	501.9	0	101.0%	85	115				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT
Method Blank

Sample ID: **MB1** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:

Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Ethylbenzene	ND	1									
m,p-Xylene	ND	2									
o-Xylene	ND	1									
Toluene	ND	2									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **9812011-01AMS** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812040835; S. W** **9812011** Run ID: **GC-1_981214A** SeqNo: **9523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	14940	200	12000	4639	85.8%	71	116				
Ethylbenzene	12380	200	12000	3293	75.8%	68	120				
m,p-Xylene	42560	400	24000	25710	70.2%	60	121				
o-Xylene	14380	200	12000	5649	72.8%	69	124				
Toluene	10490	400	12000	0	87.4%	62	128				

Sample ID: **9812011-01AMSD** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812040835; S. W** **9812011** Run ID: **GC-1_981214A** SeqNo: **9524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15210	200	12000	4639	88.1%	71	116	14940	1.8%	15	
Ethylbenzene	12620	200	12000	3293	77.7%	68	120	12380	1.9%	15	
m,p-Xylene	43140	400	24000	25710	72.6%	60	121	42560	1.4%	15	
o-Xylene	14640	200	12000	5649	74.9%	69	124	14380	1.8%	15	
Toluene	10990	400	12000	0	91.6%	62	128	10490	4.6%	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS SOIL** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:

Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	53.52	1	60	0	89.2%	71	116				
Ethylbenzene	51.32	1	60	0	85.5%	68	120				
m,p-Xylene	101.2	2	120	0	84.3%	60	121				
o-Xylene	51.44	1	60	0	85.7%	69	124				
Toluene	52.78	2	60	0	88.0%	62	128				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *17-Dec-98*

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1 QC0606/07** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	57.94	1	60	0	96.6%	85	115				
Ethylbenzene	58.83	1	60	0	98.1%	85	115				
m,p-Xylene	116.6	2	120	0	97.2%	85	115				
o-Xylene	58.68	1	60	0	97.8%	85	115				
Toluene	58.14	2	60	0	96.9%	85	115				
1,4-Difluorobenzene	81.55	0	80	0	101.9%	70	130				
4-Bromochlorobenzene	78.82	0	80	0	98.5%	50	150				
Fluorobenzene	80.62	0	80	0	100.8%	70	130				

Sample ID: **CCV2 QC0606/07** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	59.26	1	60	0	98.8%	85	115				
Ethylbenzene	58.71	1	60	0	97.9%	85	115				
m,p-Xylene	116	2	120	0	96.7%	85	115				
o-Xylene	58.71	1	60	0	97.8%	85	115				
Toluene	60.5	2	60	0	100.8%	85	115				
1,4-Difluorobenzene	83.19	0	80	0	104.0%	70	130				
4-Bromochlorobenzene	83.5	0	80	0	104.4%	50	150				
Fluorobenzene	82.19	0	80	0	102.7%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV3 QC0606/07** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	59.13	1	60	0	98.5%	85	115				
Ethylbenzene	60.95	1	60	0	101.6%	85	115				
m,p-Xylene	121.2	2	120	0	101.0%	85	115				
o-Xylene	59.73	1	60	0	99.6%	85	115				
Toluene	59.9	2	60	0	99.8%	85	115				
1,4-Difluorobenzene	81.42	0	80	0	101.8%	70	130				
4-Bromochlorobenzene	80.85	0	80	0	101.1%	50	150				
Fluorobenzene	80.89	0	80	0	101.1%	70	130				

Sample ID: **CCV4 QC0606/07** Batch ID: **GC-1_981214** Test Code: **SW8020A** Units: **µg/Kg** Analysis Date **12/14/98** Prep Date:
Client ID: **9812011** Run ID: **GC-1_981214A** SeqNo: **9520**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	58.67	1	60	0	97.8%	85	115				
Ethylbenzene	60.3	1	60	0	100.5%	85	115				
m,p-Xylene	120	2	120	0	100.0%	85	115				
o-Xylene	58.8	1	60	0	98.0%	85	115				
Toluene	58.93	2	60	0	98.2%	85	115				
1,4-Difluorobenzene	81.67	0	80	0	102.1%	70	130				
4-Bromochlorobenzene	82.17	0	80	0	102.7%	50	150				
Fluorobenzene	81.12	0	80	0	101.4%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 17-Dec-98

CLIENT: PNM - Public Service Company of NM
Work Order: 9812011
Project: Honolulu Loop Drip
Test No: SW8020A

QC SUMMARY REPORT
SURROGATE RECOVERIES

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ
9812010-01A	103	119	101
9812011-01A	84.6	82.8	105
9812011-01AMS	84.2	78.8	103
9812011-01AMSD	85	79.8	103
9812012-03A	104	63.5	103
9812012-04A	107	62.6	107
CCV1 QC0606/07	102	98.5	101
CCV2 QC0606/07	104	104	103
CCV3 QC0606/07	*102*	*101*	*101*
CCV4 QC0606/07	102	103	101
LCS SOIL	102	92.8	101
MB1	104	104	104

Acronym		Surrogate	QC Limits
14FBZ	=	1,4-Difluorobenzene	70-130
4BCBZ	=	4-Bromochlorobenzene	50-150
FLBZ	=	Fluorobenzene	70-130

*** Surrogate recovery outside acceptance limits**

1

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

March 29, 1999

Maureen Gannon
PNM - Public Service Company of NM
Alvarado Square Mail Stop 0408
Albuquerque, NM 87158
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Honolulu Drip Laydown Order No.: 9903055

Dear Maureen Gannon,

On Site Technologies, LTD. received 1 sample on 3/24/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Diesel Range Organics (SW8015)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Project: Honolulu Drip Laydown
Lab Order: 9903055

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *29-Mar-99*

Client:	PNM - Public Service Company of NM	**Client Sample Info:**	Honolulu Drip Laydown
Work Order:	9903055	**Client Sample ID:**	9903241130; 3pt. Comp
Lab ID:	9903055-01A **Matrix:** SOIL	**Collection Date:**	3/24/99 11:30:00 AM
Project:	Honolulu Drip Laydown	**COC Record:**	7553

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015**				Analyst: **DC**
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	3/25/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT
Method Blank

Sample ID: **MBlank** Batch ID: **8015DR2_S-3** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **3/23/99** Prep Date: **3/23/99**

Client ID: **9903055** Run ID: **GC-2_990323A** SeqNo: **12698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	ND	25									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **9903043-01CD** Batch ID: **8015DR2_S-3** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **3/25/99** Prep Date: **3/25/99**

Client ID: **9903055** Run ID: **GC-2_990323A** SeqNo: **12721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	2143	25	0	0	0.0%	0	0	2260	5.3%	24	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **9903047-02AMS** Batch ID: **8015DR2_S-3** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **3/25/99** Prep Date: **3/25/99**

Client ID: **9903055** Run ID: **GC-2_990323A** SeqNo: **12720**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	440.7	25	501.9	0	87.8%	63	126				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS Soil** Batch ID: **8015DR2_S-3** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **3/23/99** Prep Date: **3/23/99**

Client ID: **9903055** Run ID: **GC-2_990323A** SeqNo: **12700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	429.9	25	501.9	0	85.7%	59	126				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *29-Mar-99*

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV1 DRO_98120**	Batch ID: **8015DR2_S-3**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **3/23/99**	Prep Date:
Client ID:	**9903055**	Run ID: **GC-2_990323A**		SeqNo: **12699**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	508	25	501.9	0	101.2%	85	115				

Sample ID: **CCV2 DRO_98120**	Batch ID: **8015DR2_S-3**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **3/23/99**	Prep Date:
Client ID:	**9903055**	Run ID: **GC-2_990323A**		SeqNo: **12722**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	477.9	25	501.9	0	95.2%	85	115				

Sample ID: **CCV3 DRO_98120**	Batch ID: **8015DR2_S-3**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **3/24/99**	Prep Date:
Client ID:	**9903055**	Run ID: **GC-2_990323A**		SeqNo: **12723**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	484.1	25	501.9	0	96.5%	85	115				

Sample ID: **CCV4 DRO_98120**	Batch ID: **8015DR2_S-3**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **3/24/99**	Prep Date:
Client ID:	**9903055**	Run ID: **GC-2_990323A**		SeqNo: **12724**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	466.4	25	501.9	0	92.9%	85	115				

Sample ID: **CCV5 DRO_98120**	Batch ID: **8015DR2_S-3**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **3/25/99**	Prep Date:
Client ID:	**9903055**	Run ID: **GC-2_990323A**		SeqNo: **12725**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	499.1	25	501.9	0	99.4%	85	115				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: PNM - Public Service Company of NM
Work Order: 9903055
Project: Honolulu Drip Laydown

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV6 DRO_98120** Batch ID: **8015DR2_S-3** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **3/25/99** Prep Date:
Client ID: **9903055** Run ID: **GC-2_990323A** SeqNo: **12726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
T/R Hydrocarbons: C10-C28	501	25	501.9	0	99.8%	85	115				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank