1R - 482

REPORTS

DATE:

May 2, 2008

Larson & Associates, Inc.
Environmental Consultants

May 2, 2008

VIA EMAIL: wprice@state.nm.us
VIA CERTIFIED MAIL

Mr. Wayne Price, Chief
State of New Mexico – Department of Natural Resources
Oil Conservation Division – Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: 1R0482 – Penrose Federal Tank Battery Remediation Report
Unit F (SE/4, NW/4), Section 9, Township 22 South, Range 37 East
Lea County, New Mexico

Dear Mr. Price:
This report is submitted to the New Mexico Oil Conservation Division (OCD) on behalf of John H. Hendrix Corporation (JHHC) by Larson & Associates, Inc. (LAI), its consultant, to document the remediation of historic hydrocarbon contamination at the Penrose Federal Tank Battery (Site) located in unit F (SE/4, NW/4), Section 9, Township 22 South, Range 37 East, in Lea County, New Mexico. The remediation was a voluntary action performed by JHHC according to an OCD approved remediation plan. The Site's latitude and longitude is 32° 24' 31.9" north and 103° 10' 15.2" west, respectively. Figure 1 presents a location and topographic map.

Background

On February 27, 2006, LAI, on behalf of JHHC, submitted an investigation plan to the OCD that proposed collecting soil samples for laboratory analysis using an air rotary rig. Between June 29, 2006 and October 31, 2006, Scarborough Drilling, Inc. (Scarborough) advanced ten (10) borings (BH-21 through BH-30) from about 6 to 70 feet below ground surface (bgs). The borings were drilled in the vicinity of the tank battery (BH-21 through BH-24), west of the tank battery (BH-25) and in a covered pit (BH-26 through BH-30) located about 100 feet west of the tank battery. The soil samples were collected using split-spoon and jam tube samplers that were thoroughly cleaned between samples by washing with a solution of laboratory-grade detergent and water and rinsed with distilled water. The soil samples were placed in clean glass jars, labeled, preserved in an ice chest and delivered under chain of custody control to Environmental Lab of Texas, Inc. (ELOT) located in Odessa, Texas. ELOT analyzed the samples for benzene, toluene, ethylbenzene, xylene (BTEX) using method 8021B, total petroleum hydrocarbons (TPH) including gasoline range organics (GRO) and diesel range organics (DRO) using method 8015modified and chloride using method 300. The sample results were summarized in the following report, which included a remediation plan and was submitted to OCD: *"1R0482, Investigation Report of Historic Contamination and Remediation Plan, John H. Hendrix Corporation, Penrose Federal Lease, Battery #1, Unit F (SE/4, NW/4), Section 9, Township 22 South, Range 37 East, Lea County, New Mexico, January 9, 2007"*. A monitoring well installation plan was submitted to the OCD in a letter from Holland & Hart, LLP, as attorney for JHHC, on May 10, 2007. During a technical meeting on August 29, 2008, the OCD agreed with JHHC's proposal to install a monitoring well immediately down gradient (southeast) of the pit. Written approval for from the OCD to install the monitoring wells and proceed with remediation according to the remediation plan was received on August 30, 2007. Figure 2

presents a Site map. Appendix A presents the OCD approval.

Monitoring Well Installation and Groundwater Samples

On October 15, 2007, Scarborough installed monitoring well MW-1 approximately 20 feet southeast of the pit. The well was constructed in a 5-inch diameter boring that was drilled to approximately 90 feet bgs with 2-inch diameter schedule 40 PVC screen and casing. Approximately 20 feet of factory slotted well screen (0.010 inch) was placed near the bottom of the boring from about 65.06 to 84.37 feet bgs and surrounded with 10 to 20 graded silica sand. The sand was placed to about 63.5 feet bgs or approximately 2 feet above the screen. The remainder of the boring was filled with bentonite chips to about 1 foot bgs and the well was secured with a locking cap and locking steel cover anchored in a 3 x 3 foot concrete pad. The groundwater level stabilized within the well screen at approximately 78.16 feet bgs. Figure 2 presents the monitoring well location. Appendix B presents the well completion and geologic record.

Soil samples were collected during drilling at 0, 20 and 40 feet bgs using methods previously described. The soil samples were labeled, preserved in an ice chest and delivered under chain of custody control to ELOT, which analyzed the samples for TPH and chloride using methods previously described. No TPH was reported in the 0 and 20 foot samples, but 26.8 milligrams per kilogram (mg/Kg) was reported in the 40 foot sample. Chloride was 25.2 mg/Kg (0 feet), 706 mg/Kg (20 feet) and 305 mg/Kg (40 feet). Table 1 presents a summary of the soil analysis. Appendix C presents the laboratory report.

On October 16, 2007, LAI personnel collected groundwater samples from well MW-1 after the well was developed and purged by pumping and hand bailing to remove at least 3 casing volumes of groundwater. The water was contained in a portable tank and disposed at an OCD approved facility by Vista Services, Inc. The groundwater samples were carefully poured from a dedicated polyethylene bailer into laboratory prepared containers that were labeled, chilled in an ice chest and delivered under chain of custody control to DHL Laboratories, Inc. (DHL), located in Round Rock, Texas. DHL analyzed the samples for major anions and cations (chloride, fluoride, Nitrate as N, sulfate and bicarbonate, carbonate, hydroxide alkalinity), pH, total dissolved solids (TDS), BTEX, and dissolved metals (arsenic, barium, cadmium, chromium, lead, magnesium, mercury, potassium, selenium, silver and sodium). Table 2 presents a summary of the laboratory analysis. Appendix C presents the laboratory reports.

Chloride (257 mg/L) and fluoride (3.26 mg/L) were the only constituents that were reported at concentrations above the New Mexico Water Quality Control Commission (WQCC) domestic water quality standards of 250 milligrams per liter (mg/L) and 1.6 mg/L, respectively. No BTEX was reported in the sample, and dissolved metals were below the WQCC human health standards.

On April 8, 2008, LAI personnel collected groundwater samples from well MW-1 using the procedures previously described and DHL analyzed the samples for major anions and cations (excluding fluoride and nitrate), pH, TDS and BTEX. No BTEX was reported in the sample and none of the anions and cations exceeded the WQCC domestic water quality standards. Table 2 presents a summary of the groundwater analysis. Appendix C presents the laboratory reports.

Soil Remediation

Between January 21 and February 27, 2008, soil remediation was performed according to the OCD approved

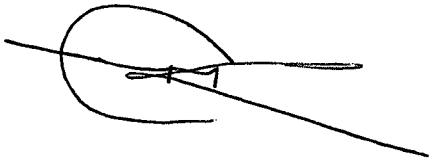
remediation plan. Environmental Plus, Inc. (EPI), located in Eunice, New Mexico, was contracted to provide excavation services and removed soil from to about 2 feet bgs in the vicinity of the tank battery, 3 feet bgs west of the tank battery and 7 feet bgs in the former pit area. The pit excavation measured approximately 60 x 100 x 7 feet and was lined with a 20-mil thickness polyethylene material before filling with clean soil. The bottom and surface of the pit excavation was crowned for storm rainwater drainage. The remaining excavations were also filled with clean soil. The location was seeded with a blend of side oats and gramma grass, as requested by the landowner. EPI hauled approximately 3,938 cubic yards of contaminated soil to the JHHC centralized surface waste management facility (NM-02-0021) located in the W/2 SW/4 and W/2 NW/4, Section 15, Township 24 South and Range 35 East NMPM. Appendix D presents photographs.

Conclusion

JHHC requests a letter from the OCD requiring no further action for the Site. JHHC also requests permission to plug the monitoring well according to New Mexico State Engineer rules and regulations. Please contact Ms. Carolyn Haynes with JHHC at (575) 390-9689if you have questions. I may be reached with questions at (432) 687-0901 or email mark@laenvironmental.com.

Sincerely,

Larson & Associates, Inc.



Mark J. Larson, P.G., C.P.G., C.G.W.P.
Senior Project Manager

Encl.

cc: Carolyn Haynes, JHHC
Larry Johnson, OCD District 1

Tables

Table 1
1R0482
Summary of Laboratory Analysis of Monitor Well Soil Samples
John H. Hendrix Corporation, Penrose Federal Tank Battery #1
Unit Letter F (SE/4,NW/4), Section 9, Township 22 South, Range 37 East, Lea County, New Mexico

Sample	Sample Depth	Date	GRO C6-C12	DRO C12 - C28	Total TPH C6-C28	Chloride
MW-1	0'	10/15/07	<17.8	<17.8	<17.8	25..2
	20'	10/15/07	<16.6	<16.6	<16.6	706
	40'	10/15/07	<15.3	26.8	26.8	305

Notes: Analysis performed by Environmental Lab of Texas, Ltd., Odessa, Texas
Results are reported in mg/Kg.
1. GRO: Gasoline - range organics
2. DRO: Diesel - range organics

Table 2
1R0482
Summary of Laboratory Analysis of Monitor Well Sample
John H. Hendrix Corporation, Penrose Federal Tank Battery #1
Unit Letter F (SE/4,NW/4), Section 9, Township 22 South, Range 37 East
Lea County, New Mexico

Parameter	Reporting Units	EPA/NMED Threshold	MW-1 10/16/07	MW-1 4/8/08
Characteristics				
Chloride	mg/L	250	**257**	224
Fluoride	mg/L	1.6	3.26	--
Nitrate-N	mg/L	10	1.64	--
Sulfate	mg/L	600	87.9	86.5
Alkalinity, Bicarbonate	mg/L	--	215	250
Alkalinity, Carbonate	mg/L	--	<10	<10
Alkalinity, Hydroxide	mg/L	--	<10	<10
Alkalinity, Total	mg/L	--	215	250
pH	pH units	6 - 9	7.37	7.28
Total Dissolved Solids	mg/L	1,000	793	776
Volatile Organics				
Benzene	mg/L	0.01	<0.0008	<0.0008
Ethylbenzene	mg/L	0.75	<0.002	<0.002
Toluene	mg/L	0.75	<0.002	<0.002
Total Xylenes	mg/L	0.62	<0.003	<0.003
Total BTEX	mg/L	--	<0.0078	<0.0078
Metals				
Arsenic	mg/L	0.1	0.0487	--
Barium	mg/L	1.0	0.0490	--
Cadmium	mg/L	0.01	<0.0003	--
Calcium	mg/L	--	64.4	--
Chromium	mg/L	0.05	<0.002	--
Lead	mg/L	0.05	<0.0003	--
Magnesium	mg/L	--	28.4	--
Mercury	mg/L	0.002	<0.00008	--
Potassium	mg/L	--	5.49	--
Selenium	mg/L	0.05	0.00544	--
Silver	mg/L	0.05	<0.001	--
Sodium	mg/L	--	168	--

Notes: Analysis performed by DHL Analytical, Inc., Round Rock, Texas
1. mg/L: Milligrams per liter
2. <: Below method detection limit

Figures

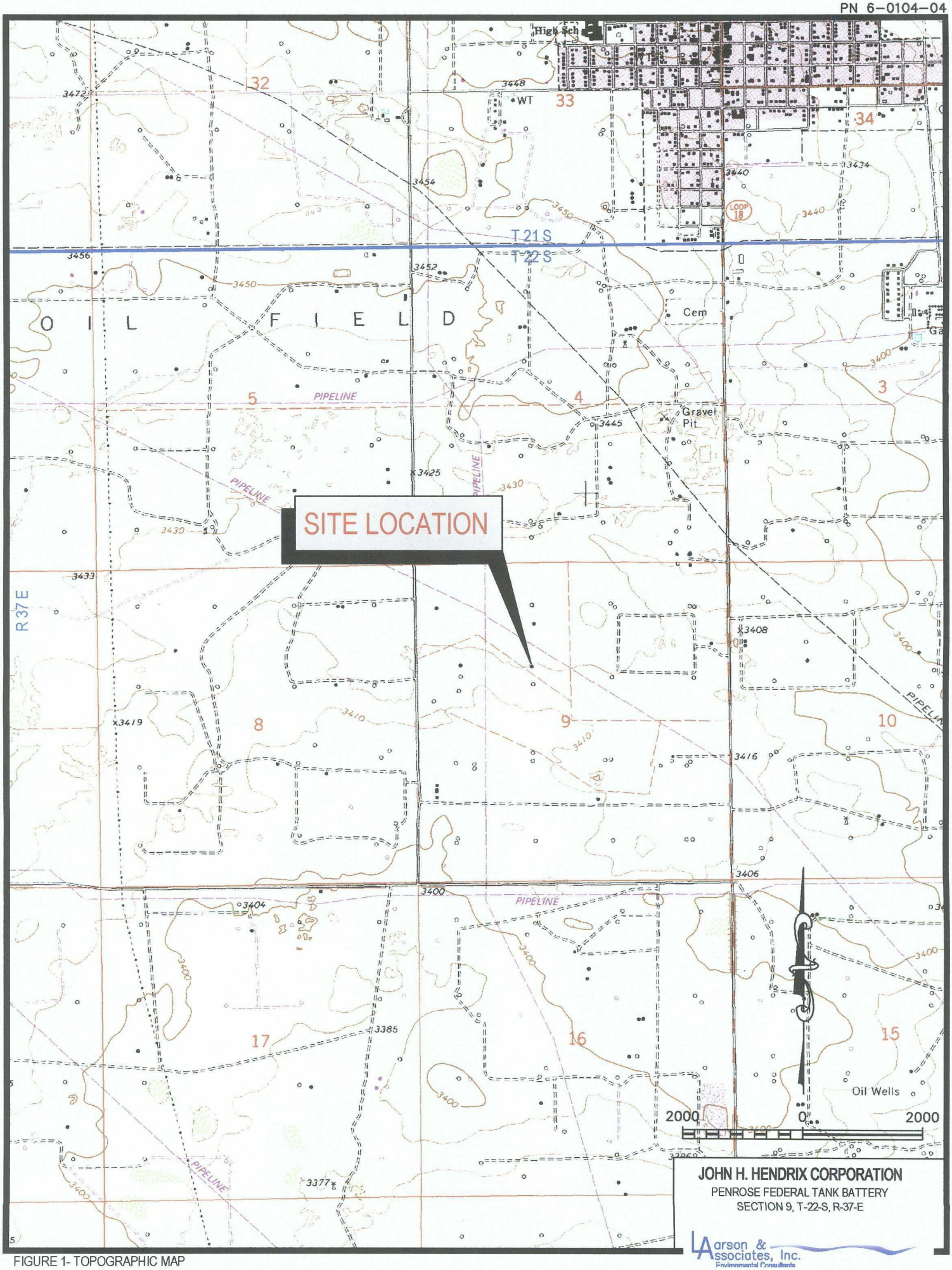


FIGURE 1- TOPOGRAPHIC MAP

PN 6-0104-04

FIGURE 2 - SITE MAP

Hansen, Edward J., EMNRD

From: Price, Wayne, EMNRD
Sent: Thursday, August 30, 2007 9:59 AM
To: mark@laenvironmental.com; mburrows@valornet.com
Cc: VonGonten, Glenn, EMNRD; Hansen, Edward J., EMNRD
Subject: Technical meeting held Aug. 29, 2007

1R0482 Penrose Federal - OCD is in receipt of the January 09 and May 10, 2007 documents and pursuant to our discussions on August 29, 2007 hereby approves installation of the monitor well in close proximately to the pit and approves the proposed remediation plan. Please include this E-mail notice in the final closure report.

Wayne Price-Environmental Bureau Chief
Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505
E-mail wayne.price@state.nm.us
Tele: 505-476-3490
Fax: 505-476-3462

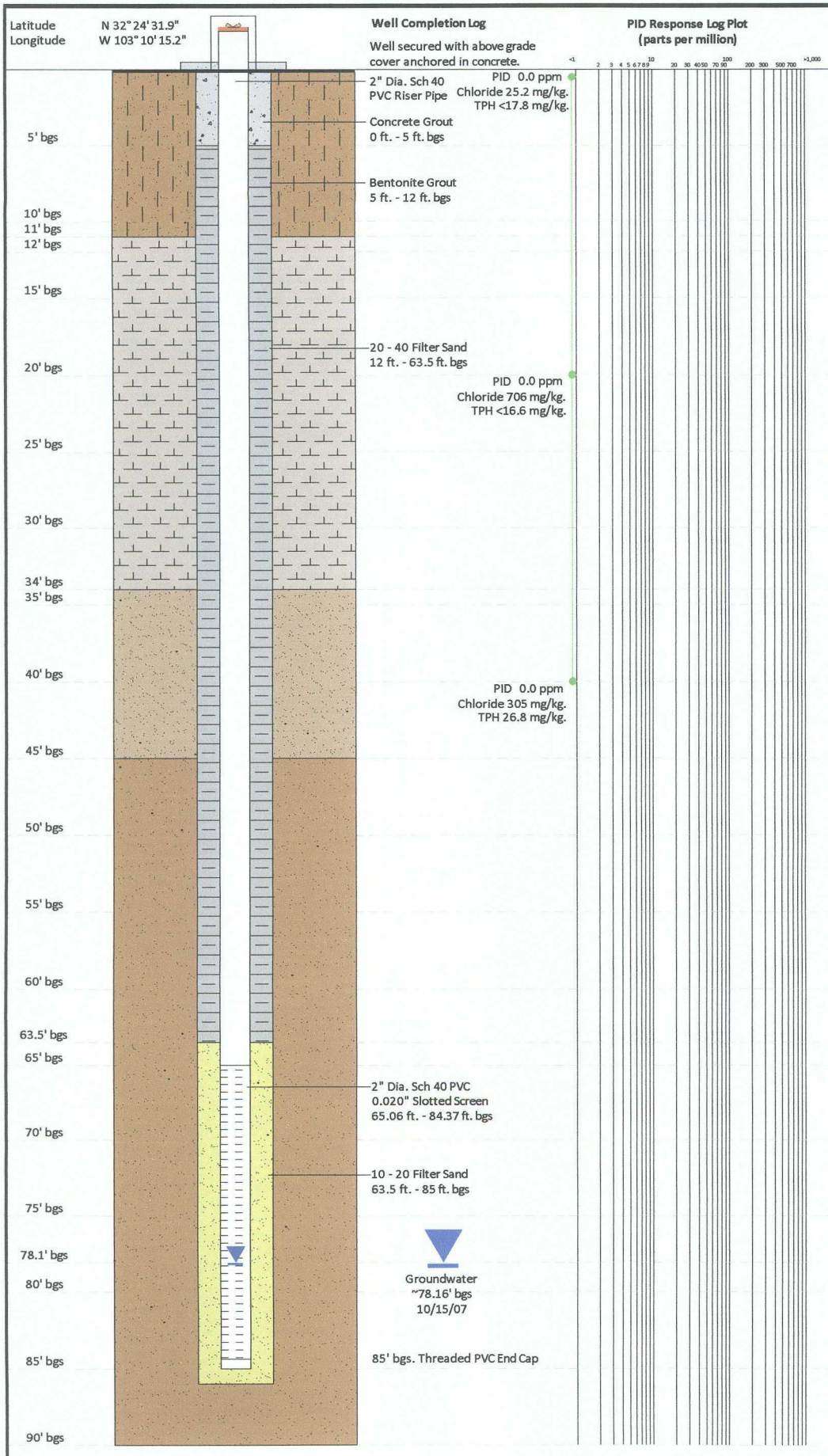
Appendix B

Monitoring Well Completion Record

Latitude N 32° 24' 31.9"
Longitude W 103° 10' 15.2"

Well Completion Log

Well secured with above grade cover anchored in concrete.



PID Response Log Plot (parts per million)

PID 0.0 ppm
Chloride 25.2 mg/kg.
TPH <17.8 mg/kg.

PID 0.0 ppm
Chloride 706 mg/kg.
TPH <16.6 mg/kg.

PID 0.0 ppm
Chloride 305 mg/kg.
TPH 26.8 mg/kg.

Lithologic Well Log

Drilling started 10/15/2007, completed 10/15/2007.
Drilled with Air Rotary by Scarborough.
5" Borehole.

SM - Yellowish red (5YR 5/6 to 4/6) Silty sand, Poorly sorted, Round, Loose to slightly Compacted.

Caliche - Pinkish gray to Pink (5YR 7/2 to 7/3) Sandy, very fine grained quartz sand, weak to moderately weak indurated.

SW - Light Reddish brown (5YR 6/4) Very fine grained quartz sand, Very porly sorted, Poorly to moderately cemented, Subround.

SW - Yellowish red (5YR 5/6) Loose.

78 ft. Wet.

~90 ft. End of boring.

JOHN H. HENDRIX - PENROSE FEDERAL
1RP0482

Larson & Associates, Inc.
Environmental Consultants

MW-1 Boring & Completion Log

Appendix C

Laboratory Reports

Analytical Report 291373

for

Larson & Associates

Project Manager: Michelle Green

Penrose Federal Battery

6-0104-04

18-OCT-07

12600 West I-20 East Odessa, Texas 79765

A Xenco Laboratories Company

Texas certification numbers:
Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

18-OCT-07

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **291373**
Penrose Federal Battery
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 291373. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 291373 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron
Odessa Laboratory Director

Sample Cross Reference 291373

Larson & Associates, Midland, TX

Penrose Federal Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW # 1, 0'	S	Oct-15-07 08:55		291373-001
MW # 1, 20'	S	Oct-15-07 09:15		291373-002
MW # 1, 40'	S	Oct-15-07 09:35		291373-003

Certificate of Analysis Summary 291373

Larson & Associates, Midland, TX

Project Name: Penrose Federal Battery

Project Id: 6-0104-04
Contact: Michelle Green
Project Location:

Date Received in Lab: Tue Oct-16-07 09:47 am
Report Date: 18-OCT-07
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	291373-001		291373-002		291373-003					
	Field Id:	MW # 1, 0'		MW # 1, 20'		MW # 1, 40'					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Oct-15-07 08:55		Oct-15-07 09:15		Oct-15-07 09:35					
Percent Moisture	*Extracted:*										
	Analyzed:	Oct-16-07 12:30		Oct-16-07 12:30		Oct-16-07 12:30					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		15.6	1.00	9.60	1.00	2.26	1.00				
TPH by SW8015 Mod	*Extracted:*	Oct-17-07 12:15		Oct-17-07 12:15		Oct-17-07 12:15					
	Analyzed:	Oct-17-07 20:58		Oct-17-07 21:24		Oct-17-07 21:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	17.8	ND	16.6	ND	15.3				
C12-C28 Diesel Range Hydrocarbons		ND	17.8	ND	16.6	26.8	15.3				
Total Chloride by EPA 325.3	*Extracted:*										
	Analyzed:	Oct-17-07 10:45		Oct-17-07 10:45		Oct-17-07 10:45					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		25.2	5.92	706	5.53	305	5.12				

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America

Brent Barron
Odessa Laboratory Director

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

* Outside XENCO'S scope of NELAC Accreditation

Form 2 - Surrogate Recoveries

Project Name: Penrose Federal Battery

Work Order #: 291373 **Project ID:** 6-0104-04

Lab Batch #: 706638 **Sample:** 291366-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 706638 **Sample:** 291366-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 706638 **Sample:** 291373-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 706638 **Sample:** 291373-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 706638 **Sample:** 291373-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.3	100	91	70-135	
o-Terphenyl	43.6	50.0	87	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Penrose Federal Battery

Work Order #: 291373 **Project ID:** 6-0104-04

Lab Batch #: 706638 **Sample:** 500506-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	46.0	50.0	92	70-135	

Lab Batch #: 706638 **Sample:** 500506-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Blank Spike Recovery

Project Name: Penrose Federal Battery

Work Order #: 291373 **Project ID:** 6-0104-04

Lab Batch #: 706638 **Sample:** 500506-1-BKS **Matrix:** Solid
Date Analyzed: 10/17/2007 **Date Prepared:** 10/17/2007 **Analyst:** SHE
Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	ND	1000	911	91	70-135	
C12-C28 Diesel Range Hydrocarbons	ND	1000	919	92	70-135	

Lab Batch #: 706614 **Sample:** 706614-1-BKS **Matrix:** Solid
Date Analyzed: 10/17/2007 **Date Prepared:** 10/17/2007 **Analyst:** IRO
Reporting Units: mg/kg **Batch #:** 1

Total Chloride by EPA 325.3 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	100	95.7	96	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

Form 3 - MS / MSD Recoveries

Project Name: Penrose Federal Battery

Work Order # : 291373 **Project ID:** 6-0104-04

Lab Batch ID: 706638 **QC- Sample ID:** 291366-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/17/2007 **Date Prepared:** 10/17/2007 **Analyst:** SHE

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	21.4	1090	1020	92	1090	1000	90	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	26.9	1090	1010	90	1090	991	88	2	70-135	35	

Lab Batch ID: 706614 **QC- Sample ID:** 291413-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/17/2007 **Date Prepared:** 10/17/2007 **Analyst:** IRO

Reporting Units: mg/kg

Total Chloride by EPA 325.3 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	52.8	2480	2250	89	2480	2220	87	2	75-125	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Penrose Federal Battery

Work Order #: 291373

Lab Batch #: 706524 **Project ID:** 6-0104-04

Date Analyzed: 10/16/2007 **Date Prepared:** 10/16/2007 **Analyst:** RBA

QC- Sample ID: 291373-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	15.6	16.0	3	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

DHL ANALYTICAL

2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 32565

CHAIN-OF-CUSTODY

CLIENT: LARSON & ASSOCIATES
ADDRESS:
PHONE: FAX
DATA REPORTED TO: MICHELLE GREEN
ADDITIONAL REPORT COPIES TO:

DATE: 10-15-07 PAGE 1 OF 1
PO #: DHL WORK ORDER #:
PROJECT LOCATION OR NAME: PENROSE FEDERAL BATTERY
CLIENT PROJECT #: 6-0104-04 COLLECTOR: M LARSON

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

ANALYSES: BTEX ⌐ MTBE ⌐ / TRPH 418.1 ⌐ TPH 1005 ⌐ TPH 1006 ⌐ / GASOLINE MOD 8015 ⌐ / DIESEL - MOD 8015 ⌐ / VOC 8260 ⌐ / SVOC 8270 ⌐ PAH 8270 ⌐ HOLDPAH ⌐ / 8081 PESTICIDES ⌐ 8151 HERBICIDES ⌐ / 8082 PCBS ⌐ / TCLP - METALS (RCRA) ⌐ TCLP VOC ⌐ / TCLP - PEST ⌐ HERB ⌐ Semi-VOC ⌐ / TOTAL METALS (RCRA) ⌐ OTHER LIST ⌐ / LEAD - TOTAL ⌐ D.W. 200.8 ⌐ TCLP ⌐ / RCI ⌐ TOX ⌐ FLASHPOINT ⌐ / TDS ⌐ TSS ⌐ % MOISTURE ⌐ CYANIDE ⌐ / pH ⌐ HEXAVALENT CHROMIUM ⌐ / EXPLOSIVES ⌐ PERCHLORATE ⌐ / CHLORIDE X ANIONS ⌐ ALKALINITY ⌐

	Field Sample I.D.	DHL Lab #	Date (2007)	Time	Matrix	Container Type	# of Containers	HCl	HNO3	H2SO4 ⌐ NaOH ⌐	ICE	UNPRESERVED	TRPH 418.1 / TPH	GASOLINE / DIESEL MOD 8015	CHLORIDE	FIELD NOTES
-01	MW#1, 0'		10-15	08:55	S	4oz	1				X		X	X	X	
-02	MW#1, 20'		10-15	09:15	S	4oz	1				X		X	X	X	
-03	MW#1, 40'		10-15	09:35	S	4oz	1				X		X	X	X	
	~~MW#1, 60'~~ (RB)															
	TOTAL						3				3					

FIELD NOTES: 291373

RELINQUISHED BY: (Signature) [signature] DATE/TIME 10-15-07 11:10 RECEIVED BY: (Signature) [signature] 10/15/07

RELINQUISHED BY: (Signature) [signature] DATE/TIME 10/16/07 9:47 RECEIVED BY: (Signature) [signature] 10/16/07 9:47

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

⌐ DHL DISPOSAL @ $5.00 each ⌐ Return

TURN AROUND TIME
RUSH ⌐ CALL FIRST
1 DAY ⌐ CALL FIRST
2 DAY X
NORMAL ⌐
OTHER ⌐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.0°C THERM #:
CUSTODY SEALS - ⌐ BROKEN ⌐ INTACT ✓ NOT USED
⌐ CARRIER BILL #
⌐ APC DELIVERY
X HAND DELIVERED

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Assoc.

Date/ Time: 10/16/07 9:47 Am

Lab ID # : 291373

Initials: gmm

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

DHL ANALYTICAL

October 19, 2007

Michelle Green
Larson & Associates
507 N. Marienfeld #202
Midland, TX 79701

TEL: (432) 687-0901
FAX: (432) 687-0456

Order No: 0710137

RE: JHHC Penrose Federal Battery

Dear Michelle Green:

DHL Analytical received 1 sample(s) on 10/17/2007 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
Lab Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-06-TX

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

DHL ANALYTICAL

2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 32564

CHAIN-OF-CUSTODY

CLIENT: LARSON & ASSOCIATES
ADDRESS:
PHONE: FAX
DATA REPORTED TO: MICHELLE GREEN
ADDITIONAL REPORT COPIES TO:

DATE: 10-16-07 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 0710137
PROJECT LOCATION OR NAME: JHHC PENROSE FEDERAL BATTERY
CLIENT PROJECT #: 6-0104-04 COLLECTOR: R. BROOKS

Authorize 5% surcharge for TRRP report? ☐ Yes ☒ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4, NaOH, ICE, UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ / TRPH 418.1 ☐ / TPH 1005 ☐ TPH 1006 ☐ / GASOLINE MOD 8015 ☐ / DIESEL - MOD 8015 ☐ / VOC 8260 ☐ / SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ / 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ / 8082 PCBS ☐ / TCLP - METALS (RCRA) ☐ TCLP VOC ☐ / TCLP - PEST ☐ HERB ☐ 5xmi VOC ☐ / TOTAL METALS (RCRA) ☐ OTHER LIST ☐ / LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ / RCI ☐ TOX ☐ FLASHPOINT ☐ / TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐ / pH ☒ HEXAVALENT CHROMIUM ☐ / EXPLOSIVES ☐ PECHLORATE ☐ / CHLORIDE ☒ ANIONS ☒ ALKALINITY ☒

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESERVED	FIELD NOTES
MW#1	01	10-16-07	13:15	W		8	X				X		CALL MICHELLE
													Anions: Cl, SO_4, NO_3, F
													Metals!
													RCRA+Ca, Mg, K, Na
													Filter (0.45u)
													All analyses per M. Green 10.17.07 BN

TOTAL

RELINQUISHED BY: (Signature) DATE/TIME 10/16/07 1800 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME 10-17-07 8:20 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☒ CALL FIRST
1 DAY ☒ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.3°C THERM #: 57
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☒ CARRIER BILL # L50
☐ APC DELIVERY
☐ HAND DELIVERED

Lone Star Overnight

Airbill No. Z3657963

Lone Star Overnight
800.800.8984
www.lso.com

35

To: SAMPLE RECEIVING
DHL ANALYTICAL
2300 DOUBLE CREEK DRIVE
ROUND ROCK, TX 78664
(512) 388 - 8222

From: MICHELLE GREEN
LARSON & ASSOCIATES, INC,
507 N MARIENFELD
SUITE 202
MIDLAND, TX 79701
(432) 687 - 0901

Service Type: By 10:30am
1D00V

AUS

By 10:30am

QuickCode: DHL
Date Printed: 10/16/2007

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned.

CUSTODY SEAL
DATE 10/16/07
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

DHL Analytical

Sample Receipt Checklist

Client Name Larson & Associates | Date Received: 10/17/2007

Work Order Number 0710137 | Received by JB

Checklist completed by: [signature] 10.17.07 (Signature / Date) | Reviewed by (DL) 10/17/07 (Initials / Date)

Carrier name: LoneStar

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Adjusted? _____ Checked by _____

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Page 1 of 1

CLIENT: Larson & Associates
Project: JHHC Penrose Federal Battery
Lab Order: 0710137

CASE NARRATIVE

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC Analysis
Method SW6020 - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2320 B (18th edition) - Alkalinity Analysis
Method M4500-H+ B (18th edition) - pH of a Water
Method M2540C (18th edition) - TDS Analysis

LOG IN

The sample was received and log-in performed on 10/17/07. A total of 1 sample was received. The sample arrived in good condition and was properly packaged.

METALS ANALYSIS

For Metals analysis, Cadmium and Lead were detected below the reporting limit in the method blank (MB-27585). The sample was non-detect for these analytes. No further corrective actions were taken and no sample results were adversely affected.

For Metals analysis, the recoveries of the matrix spike (0710135-01C MS) and matrix spike duplicate (0710135-01C MSD) were out of control limits for Calcium, Magnesium, and/or Sodium. These are flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

For Metals analysis, the recovery of the post digestion spike (0710135-01C PDS) was below control limits for Calcium and Potassium. In addition, the RPD of the serial dilution (0710135-01C SD) was above control limits for Magnesium and Selenium. These are flagged accordingly in the QC summary report. No further corrective actions were taken and no sample results were adversely affected.

DHL Analytical

Date: 10/19/07

CLIENT: Larson & Associates
Project: JHHC Penrose Federal Battery
Lab Order: 0710137

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recv'd
0710137-01	MW #1		10/16/07 01:15 PM	10/17/07

CLIENT: Larson & Associates
Project: JHHC Penrose Federal Battery
Lab Order: 0710137

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0710137-01A	MW #1	10/16/07 01:15 PM	Aqueous	SW5030B	Purge and Trap Water GC	10/17/07 09:58 AM	27583
0710137-01C	MW #1	10/16/07 01:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/17/07 10:37 AM	27584
	MW #1	10/16/07 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved - 0.45µ Filter	10/17/07 10:40 AM	27585
	MW #1	10/16/07 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved - 0.45µ Filter	10/17/07 10:40 AM	27585
	MW #1	10/16/07 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved - 0.45µ Filter	10/17/07 10:40 AM	27585
0710137-01E	MW #1	10/16/07 01:15 PM	Aqueous	E300	Anions by IC method - Water	10/17/07	R34164
	MW #1	10/16/07 01:15 PM	Aqueous	E300	Anions by IC method - Water	10/17/07	R34164
	MW #1	10/16/07 01:15 PM	Aqueous	M2320 B	Alkalinity	10/17/07 10:26 AM	R34162
	MW #1	10/16/07 01:15 PM	Aqueous	M4500-H+ B	pH	10/17/07 09:15 AM	R34156
	MW #1	10/16/07 01:15 PM	Aqueous	M2540C	Total Dissolved Solids	10/17/07 12:50 PM	TDS_W-10/17/07

CLIENT: Larson & Associates
Project: JHHC Penrose Federal Battery
Lab Order: *0710137*

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0710137-01A	MW #1	Aqueous	SW8021B	Volatile Organics by GC	27583	1	10/17/07 12:27 PM	GC9_071017A
0710137-01C	MW #1	Aqueous	SW6020	Dissolved Metals-ICPMS (0.45µ)	27585	100	10/17/07 06:02 PM	ICP-MS2_071017A
	MW #1	Aqueous	SW6020	Dissolved Metals-ICPMS (0.45µ)	27585	10	10/17/07 06:40 PM	ICP-MS2_071017A
	MW #1	Aqueous	SW6020	Dissolved Metals-ICPMS (0.45µ)	27585	1	10/17/07 07:13 PM	ICP-MS2_071017A
	MW #1	Aqueous	SW7470A	Mercury Filtered (0.45µ)	27584	1	10/17/07 02:22 PM	CETAC_HG_071017C
0710137-01E	MW #1	Aqueous	M2320 B	Alkalinity	R34162	1	10/17/07 10:26 AM	TITRATOR_071017B
	MW #1	Aqueous	E300	Anions by IC method - Water	R34164	1	10/17/07 12:35 PM	IC2_071017A
	MW #1	Aqueous	E300	Anions by IC method - Water	R34164	10	10/17/07 02:06 PM	IC2_071017A
	MW #1	Aqueous	M4500-H+ B	pH	R34156	1	10/17/07 09:15 AM	TITRATOR_071017A
	MW #1	Aqueous	M2540C	Total Dissolved Solids	TDS_W-10/17/07	1	10/18/07 08:15 AM	WC_071017A

CLIENT:	Larson & Associates	**Client Sample ID:**	MW #1
Project:	JHHC Penrose Federal Battery	**Lab ID:**	0710137-01
Project No:	6-0104-04	**Collection Date:**	10/16/07 01:15 PM
Lab Order:	0710137	**Matrix:**	Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Volatile Organics by GC		**SW8021B**					**Analyst: JAW**
Benzene	ND	0.000800	0.00200		mg/L	1	10/17/07 12:27 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/17/07 12:27 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/17/07 12:27 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/17/07 12:27 PM
Surr: a,a,a-Trifluorotoluene	92.4	0	87 - 113		%REC	1	10/17/07 12:27 PM
Mercury Filtered (0.45µ)		**SW7470A**					**Analyst: JCG**
Mercury	ND	0.0000800	0.000200		mg/L	1	10/17/07 02:22 PM
Dissolved Metals-ICPMS (0.45µ)		**SW6020**					**Analyst: KDT**
Arsenic	0.0487	0.00200	0.00600		mg/L	1	10/17/07 07:13 PM
Barium	0.0490	0.00300	0.0100		mg/L	1	10/17/07 07:13 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/17/07 07:13 PM
Calcium	64.4	1.00	1.00		mg/L	10	10/17/07 06:40 PM
Chromium	ND	0.00200	0.00600		mg/L	1	10/17/07 07:13 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/17/07 07:13 PM
Magnesium	28.4	1.00	1.00		mg/L	10	10/17/07 06:40 PM
Potassium	5.49	0.100	0.100		mg/L	1	10/17/07 07:13 PM
Selenium	0.00544	0.00200	0.00600	J	mg/L	1	10/17/07 07:13 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/17/07 07:13 PM
Sodium	168	10.0	10.0		mg/L	100	10/17/07 06:02 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	257	3.00	10.0		mg/L	10	10/17/07 02:06 PM
Fluoride	3.26	0.100	0.400		mg/L	1	10/17/07 12:35 PM
Nitrate-N	1.64	0.100	0.500		mg/L	1	10/17/07 12:35 PM
Sulfate	87.9	1.00	3.00		mg/L	1	10/17/07 12:35 PM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	215	10.0	20.0		mg/L	1	10/17/07 10:26 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	10/17/07 10:26 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	10/17/07 10:26 AM
Alkalinity, Total (As CaCO3)	215	10.0	20.0		mg/L	1	10/17/07 10:26 AM
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.37	0	0		pH Units	1	10/17/07 09:15 AM
Total Dissolved Solids		**M2540C**					**Analyst: JBC**
Total Dissolved Solids (Residue, Filterable)	793	10.0	10.0		mg/L	1	10/18/07 08:15 AM

Qualifiers:

*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
		S	Spike Recovery outside control limits

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_071017A

Sample ID:	LCS-27583	Batch ID:	27583	TestNo:		SW8021B		Units:	mg/L
SampType:	LCS	Run ID:	GC9_071017A	Analysis Date:		10/17/07 11:14 AM		Prep Date:	10/17/07
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit Qual
Benzene	0.0487	0.00200	0.0500	0	97.3	81	125		
Toluene	0.0492	0.00600	0.0500	0	98.4	84	123		
Ethylbenzene	0.0473	0.00600	0.0500	0	94.6	83	119		
Xylenes, Total	0.145	0.00900	0.150	0	96.5	81	117		
Surr: a,a,a-Trifluorotoluene	199		200.0		99.5	87	113		

Sample ID:	MB-27583	Batch ID:	27583	TestNo:		SW8021B		Units:	mg/L
SampType:	MBLK	Run ID:	GC9_071017A	Analysis Date:		10/17/07 11:31 AM		Prep Date:	10/17/07
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit Qual
Benzene	ND	0.00200							
Toluene	ND	0.00600							
Ethylbenzene	ND	0.00600							
Xylenes, Total	ND	0.00900							
Surr: a,a,a-Trifluorotoluene	200		200.0		99.9	87	113		

Sample ID:	0710137-01AMS	Batch ID:	27583	TestNo:		SW8021B		Units:	mg/L
SampType:	MS	Run ID:	GC9_071017A	Analysis Date:		10/17/07 12:44 PM		Prep Date:	10/17/07
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit Qual
Benzene	0.0432	0.00200	0.0500	0	86.3	81	125		
Toluene	0.0435	0.00600	0.0500	0	86.9	84	123		
Ethylbenzene	0.0421	0.00600	0.0500	0	84.3	83	119		
Xylenes, Total	0.128	0.00900	0.150	0	85.2	81	117		
Surr: a,a,a-Trifluorotoluene	181		200.0		90.7	87	113		

Sample ID:	0710137-01AMSD	Batch ID:	27583	TestNo:		SW8021B		Units:	mg/L
SampType:	MSD	Run ID:	GC9_071017A	Analysis Date:		10/17/07 01:00 PM		Prep Date:	10/17/07
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit Qual
Benzene	0.0444	0.00200	0.0500	0	88.8	81	125	2.83	20
Toluene	0.0445	0.00600	0.0500	0	89.0	84	123	2.33	20
Ethylbenzene	0.0429	0.00600	0.0500	0	85.8	83	119	1.86	20
Xylenes, Total	0.130	0.00900	0.150	0	87.0	81	117	2.06	20
Surr: a,a,a-Trifluorotoluene	184		200.0		91.8	87	113	0	0

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_071017A

Sample ID:	ICV-071017	**Batch ID:**	R34171	**TestNo:**	SW8021B		**Units:**	mg/L	
SampType:	ICV	**Run ID:**	GC9_071017A	**Analysis Date:**	10/17/07 10:57 AM		**Prep Date:**		
Analyte	**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Benzene	0.0978	0.00200	0.100	0	97.8	85	115			
Toluene	0.100	0.00600	0.100	0	100	85	115			
Ethylbenzene	0.0976	0.00600	0.100	0	97.6	85	115			
Xylenes, Total	0.299	0.00900	0.300	0	99.5	85	115			
Surr: a,a,a-Trifluorotoluene	206		200.0		103	87	113			

Sample ID:	CCV1-071017	**Batch ID:**	R34171	**TestNo:**	SW8021B		**Units:**	mg/L	
SampType:	CCV	**Run ID:**	GC9_071017A	**Analysis Date:**	10/17/07 02:37 PM		**Prep Date:**		
Analyte	**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Benzene	0.0472	0.00200	0.0500	0	94.5	85	115			
Toluene	0.0480	0.00600	0.0500	0	96.0	85	115			
Ethylbenzene	0.0467	0.00600	0.0500	0	93.5	85	115			
Xylenes, Total	0.142	0.00900	0.150	0	94.7	85	115			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.6	87	113			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_071017C

Sample ID:	MB-27584	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	MBLK	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:11 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		ND	0.000200								
Sample ID:	LCS-27584	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	LCS	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:13 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00190	0.000200	0.00200	0	95.0	85	115			
Sample ID:	LCSD-27584	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	LCSD	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:16 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00178	0.000200	0.00200	0	89.0	85	115	6.52	15	
Sample ID:	0710137-01C MS	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	MS	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:24 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00186	0.000200	0.00200	0	93.0	80	120			
Sample ID:	0710137-01C MSD	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	MSD	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:26 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00183	0.000200	0.00200	0	91.5	80	120	1.63	15	
Sample ID:	0710137-01C PDS	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	PDS	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:28 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00214	0.000200	0.00250	0	85.6	85	115			
Sample ID:	0710137-01C SD	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	SD	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:30 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0	0.00100	0	0				0	10	
Sample ID:	FILTER BLANK-27584	**Batch ID:**	27584		**TestNo:**	SW7470A			**Units:**		mg/L
SampType:	MBLK	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**	10/17/07 02:36 PM			**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		ND	0.000200	0							

Qualifiers:				
	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	N	Parameter not NELAC certified
	ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_071017C

Sample ID:	ICV-071017	**Batch ID:**	R34165		**TestNo:**		SW7470A			**Units:**	mg/L
SampType:	ICV	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**		10/17/07 10:30 AM			**Prep Date:**	
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00408	0.000200	0.00400	0	102	90	110			

Sample ID:	CCV2-071017	**Batch ID:**	R34165		**TestNo:**		SW7470A			**Units:**	mg/L
SampType:	CCV	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**		10/17/07 11:08 AM			**Prep Date:**	
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00209	0.000200	0.00200	0	104	90	110			

Sample ID:	CCV3-071017	**Batch ID:**	R34165		**TestNo:**		SW7470A			**Units:**	mg/L
SampType:	CCV	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**		10/17/07 02:32 PM			**Prep Date:**	
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00195	0.000200	0.00200	0	97.5	90	110			

Sample ID:	CCV4-071017	**Batch ID:**	R34165		**TestNo:**		SW7470A			**Units:**	mg/L
SampType:	CCV	**Run ID:**	CETAC_HG_071017C		**Analysis Date:**		10/17/07 02:38 PM			**Prep Date:**	
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Mercury		0.00195	0.000200	0.00200	0	97.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_071017A

Sample ID:	MB-27585	Batch ID:	27585	TestNo:	SW6020	Units:	mg/L
SampType:	MBLK	Run ID:	ICP-MS2_071017A	Analysis Date:	10/17/07 04:50 PM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	ND	0.00600								
Barium	ND	0.0100								
Cadmium	0.000456	0.00100								
Calcium	ND	0.100								
Chromium	ND	0.00600								
Lead	0.000582	0.00100								
Magnesium	ND	0.100								
Potassium	ND	0.100								
Selenium	ND	0.00600								
Silver	ND	0.00200								
Sodium	ND	0.100								

Sample ID:	FILTER BLANK-27585	Batch ID:	27585	TestNo:	SW6020	Units:	mg/L
SampType:	MBLK	Run ID:	ICP-MS2_071017A	Analysis Date:	10/17/07 04:56 PM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	ND	0.00600								
Barium	ND	0.0100								
Cadmium	ND	0.00100								
Calcium	ND	0.100								
Chromium	ND	0.00600								
Lead	ND	0.00100								
Magnesium	ND	0.100								
Potassium	ND	0.100								
Selenium	ND	0.00600								
Silver	ND	0.00200								
Sodium	ND	0.100								

Sample ID:	LCS-27585	Batch ID:	27585	TestNo:	SW6020	Units:	mg/L
SampType:	LCS	Run ID:	ICP-MS2_071017A	Analysis Date:	10/17/07 05:01 PM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.199	0.00600	0.200	0	99.5	80	120			
Barium	0.203	0.0100	0.200	0	101	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Calcium	4.89	0.100	5.00	0	97.9	80	120			
Chromium	0.203	0.00600	0.200	0	101	80	120			
Lead	0.199	0.00100	0.200	0	99.6	80	120			
Magnesium	5.13	0.100	5.00	0	103	80	120			
Potassium	5.00	0.100	5.00	0	100	80	120			
Selenium	0.198	0.00600	0.200	0	99.2	80	120			
Silver	0.213	0.00200	0.200	0	107	80	120			
Sodium	5.19	0.100	5.00	0	104	80	120			

Sample ID:	LCSD-27585	Batch ID:	27585	TestNo:	SW6020	Units:	mg/L
SampType:	LCSD	Run ID:	ICP-MS2_071017A	Analysis Date:	10/17/07 05:06 PM	Prep Date:	10/17/07

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_071017A

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.204	0.00600	0.200	0	102	80	120	2.63	15	
Barium	0.209	0.0100	0.200	0	104	80	120	2.87	15	
Cadmium	0.207	0.00100	0.200	0	104	80	120	3.04	15	
Calcium	5.19	0.100	5.00	0	104	80	120	5.97	15	
Chromium	0.211	0.00600	0.200	0	105	80	120	3.72	15	
Lead	0.205	0.00100	0.200	0	103	80	120	3.11	15	
Magnesium	5.37	0.100	5.00	0	107	80	120	4.55	15	
Potassium	5.29	0.100	5.00	0	106	80	120	5.58	15	
Selenium	0.202	0.00600	0.200	0	101	80	120	1.85	15	
Silver	0.210	0.00200	0.200	0	105	80	120	1.42	15	
Sodium	5.43	0.100	5.00	0	109	80	120	4.37	15	

Sample ID: 0710135-01C SD **Batch ID:** 27585 **TestNo:** SW6020 **Units:** mg/L
SampType: SD **Run ID:** ICP-MS2_071017A **Analysis Date:** 10/17/07 05:15 PM **Prep Date:** 10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Magnesium	111	50.0	0	99.1				11.6	10	R
Sodium	1990	50.0	0	1800				10.0	10	

Sample ID: 0710135-01C MS **Batch ID:** 27585 **TestNo:** SW6020 **Units:** mg/L
SampType: MS **Run ID:** ICP-MS2_071017A **Analysis Date:** 10/17/07 05:20 PM **Prep Date:** 10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Sodium	21000	10.0	5.00	1800	384000	80	120			S

Sample ID: 0710135-01C MSD **Batch ID:** 27585 **TestNo:** SW6020 **Units:** mg/L
SampType: MSD **Run ID:** ICP-MS2_071017A **Analysis Date:** 10/17/07 05:25 PM **Prep Date:** 10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Sodium	19800	10.0	5.00	1800	360000	80	120	5.88	15	S

Sample ID: 0710135-01C PDS **Batch ID:** 27585 **TestNo:** SW6020 **Units:** mg/L
SampType: PDS **Run ID:** ICP-MS2_071017A **Analysis Date:** 10/17/07 05:29 PM **Prep Date:** 10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Magnesium	601	10.0	500	99.1	100	75	125			
Sodium	2270	10.0	500	1800	95.4	75	125			

Sample ID: 0710135-01C SD **Batch ID:** 27585 **TestNo:** SW6020 **Units:** mg/L
SampType: SD **Run ID:** ICP-MS2_071017A **Analysis Date:** 10/17/07 07:22 PM **Prep Date:** 10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0	0.0300	0	0.00852				0	10	
Barium	0.105	0.0500	0	0.100				4.43	10	
Cadmium	0	0.00500	0	0				0	10	
Calcium	373	0.500	0	352				5.85	10	
Chromium	0	0.0300	0	0				0	10	
Lead	0	0.00500	0	0				0	10	
Potassium	18.9	0.500	0	17.6				6.96	10	
Selenium	0.0100	0.00300	0	0.00821				19.7	10	R
Silver	0	0.0100	0	0				0	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_071017A

Sample ID:	0710135-01C MS	Batch ID:	27585		TestNo:		SW6020		Units:		mg/L
SampType:	MS	Run ID:	ICP-MS2_071017A		Analysis Date:		10/17/07 07:27 PM		Prep Date:		10/17/07
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic		0.191	0.00600	0.200	0.00852	91.2	80	120			
Barium		0.301	0.0100	0.200	0.100	101	80	120			
Cadmium		0.182	0.00100	0.200	0	90.8	80	120			
Calcium		357	0.100	5.00	352	110	80	120			
Chromium		0.176	0.00600	0.200	0	87.8	80	120			
Lead		0.209	0.00100	0.200	0	104	80	120			
Magnesium		94.4	0.100	5.00	90.0	89.4	80	120			
Potassium		21.9	0.100	5.00	17.6	85.4	80	120			
Selenium		0.175	0.00600	0.200	0.00821	83.6	80	120			
Silver		0.186	0.00200	0.200	0	93.2	80	120			

Sample ID:	0710135-01C MSD	Batch ID:	27585		TestNo:		SW6020		Units:		mg/L
SampType:	MSD	Run ID:	ICP-MS2_071017A		Analysis Date:		10/17/07 07:31 PM		Prep Date:		10/17/07
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic		0.189	0.00600	0.200	0.00852	90.0	80	120	1.21	15	
Barium		0.299	0.0100	0.200	0.100	99.3	80	120	0.833	15	
Cadmium		0.177	0.00100	0.200	0	88.6	80	120	2.40	15	
Calcium		363	0.100	5.00	352	218	80	120	1.50	15	S
Chromium		0.173	0.00600	0.200	0	86.6	80	120	1.43	15	
Lead		0.205	0.00100	0.200	0	102	80	120	1.98	15	
Magnesium		92.5	0.100	5.00	90.0	50.8	80	120	2.06	15	S
Potassium		21.6	0.100	5.00	17.6	80.6	80	120	1.10	15	
Selenium		0.169	0.00600	0.200	0.00821	80.5	80	120	3.60	15	
Silver		0.187	0.00200	0.200	0	93.5	80	120	0.268	15	

Sample ID:	0710135-01C PDS	Batch ID:	27585		TestNo:		SW6020		Units:		mg/L
SampType:	PDS	Run ID:	ICP-MS2_071017A		Analysis Date:		10/17/07 07:36 PM		Prep Date:		10/17/07
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic		0.189	0.00600	0.200	0.00852	90.1	75	125			
Barium		0.283	0.0100	0.200	0.100	91.1	75	125			
Cadmium		0.172	0.00100	0.200	0	85.8	75	125			
Calcium		345	0.100	5.00	352	-146	75	125			S
Chromium		0.170	0.00600	0.200	0	85.0	75	125			
Lead		0.202	0.00100	0.200	0	101	75	125			
Potassium		21.0	0.100	5.00	17.6	67.6	75	125			S
Selenium		0.168	0.00600	0.200	0.00821	79.9	75	125			
Silver		0.181	0.00200	0.200	0	90.4	75	125			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_071017A

Sample ID:	ICV2-071017	Batch ID:	R34180	TestNo:		SW6020		Units:	mg/L	
SampType:	ICV	Run ID:	ICP-MS2_071017A	Analysis Date:		10/17/07 04:27 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.101	0.00600	0.100	0	101	90	110			
Barium	0.0991	0.0100	0.100	0	99.1	90	110			
Cadmium	0.0988	0.00100	0.100	0	98.8	90	110			
Calcium	2.41	0.100	2.50	0	96.3	90	110			
Chromium	0.101	0.00600	0.100	0	101	90	110			
Lead	0.0998	0.00100	0.100	0	99.8	90	110			
Magnesium	2.56	0.100	2.50	0	102	90	110			
Potassium	2.50	0.100	2.50	0	100	90	110			
Selenium	0.0991	0.00600	0.100	0	99.1	90	110			
Silver	0.0996	0.00200	0.100	0	99.6	90	110			
Sodium	2.59	0.100	2.50	0	103	90	110			

Sample ID:	CCV4-071017	Batch ID:	R34180	TestNo:		SW6020		Units:	mg/L	
SampType:	CCV	Run ID:	ICP-MS2_071017A	Analysis Date:		10/17/07 05:39 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.199	0.00600	0.200	0	99.7	90	110			
Barium	0.205	0.0100	0.200	0	102	90	110			
Cadmium	0.203	0.00100	0.200	0	102	90	110			
Calcium	5.06	0.100	5.00	0	101	90	110			
Chromium	0.198	0.00600	0.200	0	99.2	90	110			
Lead	0.199	0.00100	0.200	0	99.4	90	110			
Magnesium	5.15	0.100	5.00	0	103	90	110			
Potassium	5.15	0.100	5.00	0	103	90	110			
Selenium	0.199	0.00600	0.200	0	99.3	90	110			
Silver	0.205	0.00200	0.200	0	103	90	110			
Sodium	5.20	0.100	5.00	0	104	90	110			

Sample ID:	CCV5-071017	Batch ID:	R34180	TestNo:		SW6020		Units:	mg/L	
SampType:	CCV	Run ID:	ICP-MS2_071017A	Analysis Date:		10/17/07 06:12 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Calcium	4.92	0.100	5.00	0	98.4	90	110			
Magnesium	5.17	0.100	5.00	0	103	90	110			
Potassium	5.16	0.100	5.00	0	103	90	110			
Sodium	5.25	0.100	5.00	0	105	90	110			

Sample ID:	CCV6-071017	Batch ID:	R34180	TestNo:		SW6020		Units:	mg/L	
SampType:	CCV	Run ID:	ICP-MS2_071017A	Analysis Date:		10/17/07 06:49 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.202	0.00600	0.200	0	101	90	110			
Barium	0.202	0.0100	0.200	0	101	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	4.93	0.100	5.00	0	98.5	90	110			
Chromium	0.202	0.00600	0.200	0	101	90	110			
Lead	0.197	0.00100	0.200	0	98.6	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_071017A

Magnesium		5.23	0.100	5.00	0	105	90	110			
Potassium		5.17	0.100	5.00	0	103	90	110			
Selenium		0.198	0.00600	0.200	0	99.0	90	110			
Silver		0.203	0.00200	0.200	0	101	90	110			

Sample ID:	CCV7-071017	**Batch ID:**	R34180		**TestNo:**		SW6020		**Units:**		mg/L
SampType:	CCV	**Run ID:**	ICP-MS2_071017A		**Analysis Date:**		10/17/07 07:50 PM		**Prep Date:**		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Arsenic		0.200	0.00600	0.200	0	100	90	110			
Barium		0.200	0.0100	0.200	0	99.9	90	110			
Cadmium		0.200	0.00100	0.200	0	100	90	110			
Calcium		4.92	0.100	5.00	0	98.3	90	110			
Chromium		0.203	0.00600	0.200	0	101	90	110			
Lead		0.197	0.00100	0.200	0	98.3	90	110			
Magnesium		5.24	0.100	5.00	0	105	90	110			
Potassium		5.17	0.100	5.00	0	103	90	110			
Selenium		0.197	0.00600	0.200	0	98.7	90	110			
Silver		0.207	0.00200	0.200	0	104	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_071017A

Sample ID:	ICV-071017	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	ICV	Run ID:	IC2_071017A	Analysis Date:	10/17/07 10:02 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	25.2	1.00	25.00	0	101	90	110			
Fluoride	10.8	0.400	10.00	0	108	90	110			
Nitrate-N	12.8	0.500	12.50	0	102	90	110			
Sulfate	77.1	3.00	75.00	0	103	90	110			

Sample ID:	LCS-071017	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC2_071017A	Analysis Date:	10/17/07 10:38 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	4.28	0.400	4.000	0	107	90	110			
Nitrate-N	5.04	0.500	5.000	0	101	90	110			
Sulfate	30.9	3.00	30.00	0	103	90	110			

Sample ID:	MB-071017	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC2_071017A	Analysis Date:	10/17/07 11:07 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	ND	1.00								
Fluoride	ND	0.400								
Nitrate-N	ND	0.500								
Sulfate	ND	3.00								

Sample ID:	LCSD-071017	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC2_071017A	Analysis Date:	10/17/07 11:51 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	9.95	1.00	10.00	0	99.5	90	110	1.33	20	
Fluoride	4.25	0.400	4.000	0	106	90	110	0.648	20	
Nitrate-N	4.96	0.500	5.000	0	99.2	90	110	1.58	20	
Sulfate	32.5	3.00	30.00	0	108	90	110	4.90	20	

Sample ID:	0710137-01E MS	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC2_071017A	Analysis Date:	10/17/07 12:49 PM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Fluoride	6.09	0.400	4.000	1.956	103	90	110			
Nitrate-N	5.61	0.500	5.000	0.9816	92.7	90	110			
Sulfate	81.6	3.00	30.00	52.76	96.1	90	110			

Sample ID:	0710137-01E MSD	Batch ID:	R34164	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC2_071017A	Analysis Date:	10/17/07 01:04 PM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Fluoride	6.08	0.400	4.000	1.956	103	90	110	0.107	20	
Nitrate-N	5.65	0.500	5.000	0.9816	93.4	90	110	0.692	20	
Sulfate	81.8	3.00	30.00	52.76	96.9	90	110	0.300	20	

Sample ID:	CCV1-071017	Batch ID:	R34164	TestNo:	E300	Units:	mg/L

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_071017A

SampType:	CCV	Run ID:	IC2_071017A		Analysis Date:		10/17/07 01:19 PM		Prep Date:		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Chloride		9.99	1.00	10.00	0	99.9	90	110			
Fluoride		4.20	0.400	4.000	0	105	90	110			
Nitrate-N		5.05	0.500	5.000	0	101	90	110			
Sulfate		29.8	3.00	30.00	0	99.2	90	110			

Sample ID:	0710137-01E MS	Batch ID:	R34164		TestNo:		E300		Units:		mg/L
SampType:	MS	Run ID:	IC2_071017A		Analysis Date:		10/17/07 02:35 PM		Prep Date:		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Chloride		250	10.0	100.0	154.1	95.5	90	110			

Sample ID:	0710137-01E MSD	Batch ID:	R34164		TestNo:		E300		Units:		mg/L
SampType:	MSD	Run ID:	IC2_071017A		Analysis Date:		10/17/07 02:50 PM		Prep Date:		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Chloride		250	10.0	100.0	154.1	95.9	90	110	0.150	20	

Sample ID:	CCV2-071017	Batch ID:	R34164		TestNo:		E300		Units:		mg/L
SampType:	CCV	Run ID:	IC2_071017A		Analysis Date:		10/17/07 03:21 PM		Prep Date:		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Chloride		10.1	1.00	10.00	0	101	90	110			
Fluoride		4.22	0.400	4.000	0	106	90	110			
Sulfate		30.1	3.00	30.00	0	100	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_071017A

Sample ID:	ICV-071017	**Batch ID:**	R34156		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	ICV	**Run ID:**	TITRATOR_071017A		**Analysis Date:**		10/17/07 09:11 AM		**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		9.94	0	10.00	0	99.4	99	101			

Sample ID:	0710135-01E DUP	**Batch ID:**	R34156		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	DUP	**Run ID:**	TITRATOR_071017A		**Analysis Date:**		10/17/07 09:13 AM		**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		6.97	0	0	6.940				0.431	15	

Sample ID:	CCV-071017	**Batch ID:**	R34156		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	CCV	**Run ID:**	TITRATOR_071017A		**Analysis Date:**		10/17/07 09:16 AM		**Prep Date:**		10/17/07
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		7.08	0	7.000	0	101	97.1	102.9			

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	N	Parameter not NELAC certified
	ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_071017B

Sample ID:	ICV-071017	Batch ID:	R34162	TestNo:	M2320 B	Units:	mg/L
SampType:	ICV	Run ID:	TITRATOR_071017B	Analysis Date:	10/17/07 09:57 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	9.12	20.0	0							
Alkalinity, Carbonate (As CaCO3)	89.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	98.7	20.0	100.0	0	98.7	98	102			

Sample ID:	MB-071017	Batch ID:	R34162	TestNo:	M2320 B	Units:	mg/L
SampType:	MBLK	Run ID:	TITRATOR_071017B	Analysis Date:	10/17/07 09:58 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	20.0								
Alkalinity, Carbonate (As CaCO3)	ND	20.0								
Alkalinity, Hydroxide (As CaCO3)	ND	20.0								
Alkalinity, Total (As CaCO3)	ND	20.0								

Sample ID:	LCS-071017	Batch ID:	R34162	TestNo:	M2320 B	Units:	mg/L
SampType:	LCS	Run ID:	TITRATOR_071017B	Analysis Date:	10/17/07 10:02 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	52.2	20.0	50.00	0	104	74	129			

Sample ID:	0710135-01E DUP	Batch ID:	R34162	TestNo:	M2320 B	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_071017B	Analysis Date:	10/17/07 10:16 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	271	20.0	0	271.2				0.148	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	271	20.0	0	271.2				0.148	20	

Sample ID:	CCV-071017	Batch ID:	R34162	TestNo:	M2320 B	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_071017B	Analysis Date:	10/17/07 10:32 AM	Prep Date:	10/17/07

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	12.2	20.0	0							
Alkalinity, Carbonate (As CaCO3)	86.7	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	99.0	20.0	100.0	0	99.0	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0710137
Project: JHHC Penrose Federal Battery

ANALYTICAL QC SUMMARY REPORT

RunID: WC_071017A

Sample ID:	MB-071017	**Batch ID:**	TDS_W-10/17/07	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	MBLK	**Run ID:**	WC_071017A	**Analysis Date:**	10/18/07 08:15 AM			**Prep Date:**	10/17/07		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		ND	10.0								

Sample ID:	LCS-071017	**Batch ID:**	TDS_W-10/17/07	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	LCS	**Run ID:**	WC_071017A	**Analysis Date:**	10/18/07 08:15 AM			**Prep Date:**	10/17/07		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		735	10.0	745.6	0	98.6	70	126			

Sample ID:	0710135-01E DUP	**Batch ID:**	TDS_W-10/17/07	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	DUP	**Run ID:**	WC_071017A	**Analysis Date:**	10/18/07 08:15 AM			**Prep Date:**	10/17/07		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		6580	10.0	0	6610				0.379	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

DHL ANALYTICAL

April 18, 2008

Michelle Green
Larson & Associates
507 N. Marienfeld #202
Midland, TX 79701

TEL: (432) 687-0901
FAX: (432) 687-0456

Order No: 0804107

RE: JHHC-Penrose Federal

Dear Michelle Green:

DHL Analytical received 1 sample(s) on 4/10/2008 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
Lab Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-06-TX

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

#0804107

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc. Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME: Larson
SITE MANAGER: M. Green
PROJECT NO.: 6-0104-04
PROJECT NAME: TAHC - Penrose Irdial
PAGE OF
LAB. PO #

2008 DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PARAMETERS/METHOD NUMBER: Anions (Cl, SO4, Alk, pH, TDS)	AK, pH, TDS	BTEX	Metals	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
4-8	2:30	X			MW-1	6	X	X	X	X		Lab filtering 0.45µm mtx acid Metals fraction + H2O mtx

SAMPLED BY: (Signature) K.W. Brook — DATE: 4-8-08 TIME: 4:30
RELINQUISHED BY: (Signature) K.W. Brook — DATE: 4-8-08 TIME: 4:30
RECEIVED BY: (Signature) — DATE: 4-9-08 TIME: 1:00

RELINQUISHED BY: (Signature) — DATE: 4-9-08 TIME: 4:50pm
RECEIVED BY: (Signature) Loredan — DATE: 4-9-08 TIME: 16:00

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #:
HAND DELIVERED UPS OTHER: Loredan

COMMENTS:

TURNAROUND TIME NEEDED

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

RECEIVING LABORATORY: DHL Analytical
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 04-10-08 TIME: 16:00

SAMPLE CONDITION WHEN RECEIVED: 1.20 #57

LA CONTACT PERSON:

SAMPLE TYPE:

Lone Star Overnight

Airbill No. Z4181963

Lone Star Overnight
800.800.8984
www.lso.com

To: SAMPLE RECEIVING
DHL ANALYTICAL
2300 DOUBLE CREEK DRIVE
ROUND ROCK, TX 78664
(512) 388 - 8222

From: MARK LARSON
LARSON & ASSOCIATES, INC.
507 N. MARIENFELD
SUITE 202
MIDLAND, TX 79701
(432) 687 - 0901

Service Type: By 10:30am
1D00V

AUS

By 10:30am

QuickCode: DHL
Date Printed: 4/9/2008

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned.

CUSTODY SEAL
DATE 4-9-08
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

DHL Analytical

Sample Receipt Checklist

Client Name Larson & Associates | Date Received: 4/10/2008

Work Order Number 0804107 | Received by JB

Checklist completed by: [signature] 4-10-08 (Signature / Date) | Reviewed by (DL) 4/10/08 (Initials / Date)

Carrier name: LoneStar

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Adjusted? qeo Checked by QB

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: Acidified Sample 0804107-10 with HNO3 (Lot #5108)

Corrective Action _____

Page 1 of 1

DHL Analytical Date: 04/18/08

CLIENT:	Larson & Associates	**CASE NARRATIVE**
Project:	JHHC-Penrose Federal	
Lab Order:	0804107	

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC Analysis
Method E300 - Anions Analysis
Method M2320 B (18th edition) - Alkalinity Analysis
Method M4500-H+ B (18th edition) - pH of a Water
Method M2540C (18th edition) - TDS Analysis

LOG IN

The sample was received and log-in performed on 4/9/08. A total of 1 sample was received. The sample arrived in good condition and was properly packaged.

DHL Analytical

Date: 04/18/08

CLIENT: Larson & Associates
Project: JHHC-Penrose Federal
Lab Order: 0804107

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recv'd
0804107-01	MW-1		04/08/08 02:30 PM	04/10/08

CLIENT: Larson & Associates
Project: JHHC-Penrose Federal
Lab Order: 0804107

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0804107-01A	MW-1	04/08/08 02:30 PM	Aqueous	SW5030B	Purge and Trap Water GC	04/16/08 03:20 PM	29931
0804107-01B	MW-1	04/08/08 02:30 PM	Aqueous	M4500-H+ B	pH	04/11/08 09:08 AM	R37130
0804107-01C	MW-1	04/08/08 02:30 PM	Aqueous	E300	Anions by IC method - Water	04/11/08	R37135
	MW-1	04/08/08 02:30 PM	Aqueous	E300	Anions by IC method - Water	04/11/08	R37135
	MW-1	04/08/08 02:30 PM	Aqueous	M2320 B	Alkalinity	04/11/08 11:07 AM	R37136
	MW-1	04/08/08 02:30 PM	Aqueous	M2540C	Total Dissolved Solids	04/14/08	TDS_W-04/14/08

CLIENT: Larson & Associates
Project: JHHC-Penrose Federal
Lab Order: 0804107

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0804107-01A	MW-1	Aqueous	SW8021B	Volatile Organics by GC	29931	1	04/16/08 05:35 PM	GC9_080416A
0804107-01B	MW-1	Aqueous	M4500-H+ B	pH	R37130	1	04/11/08 09:08 AM	TITRATOR_080411A
0804107-01C	MW-1	Aqueous	M2320 B	Alkalinity	R37136	1	04/11/08 11:07 AM	TITRATOR_080411B
	MW-1	Aqueous	E300	Anions by IC method - Water	R37135	2	04/11/08 09:24 AM	IC2_080411A
	MW-1	Aqueous	E300	Anions by IC method - Water	R37135	10	04/11/08 10:37 AM	IC2_080411A
	MW-1	Aqueous	M2540C	Total Dissolved Solids	TDS_W-04/14/08	1	04/14/08 09:50 AM	WC_080414B

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-1
Project:	JHHC-Penrose Federal	**Lab ID:**	0804107-01
Project No:	6-0104-04	**Collection Date:**	04/08/08 02:30 PM
Lab Order:	0804107	**Matrix:**	Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Volatile Organics by GC		**SW8021B**					**Analyst: JAW**
Benzene	ND	0.000800	0.00200		mg/L	1	04/16/08 05:35 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	04/16/08 05:35 PM
Toluene	ND	0.00200	0.00600		mg/L	1	04/16/08 05:35 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	04/16/08 05:35 PM
Surr: a,a,a-Trifluorotoluene	96.3	0	87 - 113		%REC	1	04/16/08 05:35 PM
Anions by IC method - Water		**E300**					**Analyst: JBC**
Chloride	224	3.00	10.0		mg/L	10	04/11/08 10:37 AM
Sulfate	86.5	2.00	6.00		mg/L	2	04/11/08 09:24 AM
Alkalinity		**M2320 B**					**Analyst: JBC**
Alkalinity, Bicarbonate (As CaCO3)	250	10.0	20.0		mg/L	1	04/11/08 11:07 AM
Alkalinity, Carbonate (As CaCO3)	ND	10.0	20.0		mg/L	1	04/11/08 11:07 AM
Alkalinity, Hydroxide (As CaCO3)	ND	10.0	20.0		mg/L	1	04/11/08 11:07 AM
Alkalinity, Total (As CaCO3)	250	10.0	20.0		mg/L	1	04/11/08 11:07 AM
pH		**M4500-H+ B**					**Analyst: JBC**
pH	7.28	0	0		pH Units	1	04/11/08 09:08 AM
Total Dissolved Solids		**M2540C**					**Analyst: JBC**
Total Dissolved Solids (Residue, Filterable)	776	10.0	10.0		mg/L	1	04/14/08 09:50 AM

Qualifiers:				
	*	Value exceeds TCLP Maximum Concentration Level	J	Analyte detected between MDL and RL
	B	Analyte detected in the associated Method Blank	MDL	Method Detection Limit
	C	Sample Result or QC discussed in the Case Narrative	N	Parameter not NELAC certified
	DF	Dilution Factor	ND	Not Detected at the Method Detection Limit
	E	TPH pattern not Gas or Diesel Range Pattern	RL	Reporting Limit
			S	Spike Recovery outside control limits

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_080416A

Sample ID:	LCS-29931	Batch ID:	29931	TestNo:	SW8021B	Units:	mg/L
SampType:	LCS	Run ID:	GC9_080416A	Analysis Date:	04/16/08 04:00 PM	Prep Date:	04/16/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0513	0.00200	0.0500	0	103	81	125			
Toluene	0.0528	0.00600	0.0500	0	106	84	123			
Ethylbenzene	0.0486	0.00600	0.0500	0	97.3	83	119			
Xylenes, Total	0.148	0.00900	0.150	0	98.5	81	117			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.5	87	113			

Sample ID:	MB-29931	Batch ID:	29931	TestNo:	SW8021B	Units:	mg/L
SampType:	MBLK	Run ID:	GC9_080416A	Analysis Date:	04/16/08 04:17 PM	Prep Date:	04/16/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	189		200.0		94.6	87	113			

Sample ID:	0804131-01AMS	Batch ID:	29931	TestNo:	SW8021B	Units:	mg/L
SampType:	MS	Run ID:	GC9_080416A	Analysis Date:	04/16/08 05:01 PM	Prep Date:	04/16/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0491	0.00200	0.0500	0	98.2	81	125			
Toluene	0.0508	0.00600	0.0500	0	102	84	123			
Ethylbenzene	0.0465	0.00600	0.0500	0	92.9	83	119			
Xylenes, Total	0.142	0.00900	0.150	0	94.5	81	117			
Surr: a,a,a-Trifluorotoluene	191		200.0		95.3	87	113			

Sample ID:	0804131-01AMSD	Batch ID:	29931	TestNo:	SW8021B	Units:	mg/L
SampType:	MSD	Run ID:	GC9_080416A	Analysis Date:	04/16/08 05:18 PM	Prep Date:	04/16/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0509	0.00200	0.0500	0	102	81	125	3.53	20	
Toluene	0.0528	0.00600	0.0500	0	106	84	123	3.92	20	
Ethylbenzene	0.0485	0.00600	0.0500	0	97.0	83	119	4.25	20	
Xylenes, Total	0.148	0.00900	0.150	0	98.9	81	117	4.52	20	
Surr: a,a,a-Trifluorotoluene	195		200.0		97.6	87	113	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: GC9_080416A

Sample ID:	ICV-080416	**Batch ID:**	R37225	**TestNo:**	SW8021B		**Units:**	mg/L	
SampType:	ICV	**Run ID:**	GC9_080416A	**Analysis Date:**	04/16/08 03:43 PM		**Prep Date:**		
Analyte	**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Benzene	0.0948	0.00200	0.100	0	94.8	85	115			
Toluene	0.0979	0.00600	0.100	0	97.9	85	115			
Ethylbenzene	0.0957	0.00600	0.100	0	95.7	85	115			
Xylenes, Total	0.287	0.00900	0.300	0	95.8	85	115			
Surr: a,a,a-Trifluorotoluene	198		200.0		98.8	87	113			

Sample ID:	CCV1-080416	**Batch ID:**	R37225	**TestNo:**	SW8021B		**Units:**	mg/L	
SampType:	CCV	**Run ID:**	GC9_080416A	**Analysis Date:**	04/16/08 07:00 PM		**Prep Date:**		
Analyte	**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Benzene	0.0516	0.00200	0.0500	0	103	85	115			
Toluene	0.0527	0.00600	0.0500	0	105	85	115			
Ethylbenzene	0.0493	0.00600	0.0500	0	98.5	85	115			
Xylenes, Total	0.151	0.00900	0.150	0	101	85	115			
Surr: a,a,a-Trifluorotoluene	201		200.0		100	87	113			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_080411A

Sample ID:	ICV-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	ICV	Run ID:	IC2_080411A		Analysis Date:		04/11/08 08:23 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		25.3	1.00	25.00	0	101	90	110			
Sulfate		77.0	3.00	75.00	0	103	90	110			

Sample ID:	MB-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	MBLK	Run ID:	IC2_080411A		Analysis Date:		04/11/08 08:40 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		ND	1.00								
Sulfate		ND	3.00								

Sample ID:	LCS-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	LCS	Run ID:	IC2_080411A		Analysis Date:		04/11/08 08:54 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		9.83	1.00	10.00	0	98.3	90	110			
Sulfate		30.1	3.00	30.00	0	100	90	110			

Sample ID:	LCSD-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	LCSD	Run ID:	IC2_080411A		Analysis Date:		04/11/08 09:09 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		9.87	1.00	10.00	0	98.7	90	110	0.335	20	
Sulfate		30.2	3.00	30.00	0	101	90	110	0.0988	20	

Sample ID:	CCV1-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	CCV	Run ID:	IC2_080411A		Analysis Date:		04/11/08 11:08 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		10.0	1.00	10.00	0	100	90	110			
Sulfate		30.4	3.00	30.00	0	101	90	110			

Sample ID:	0804109-02C MS	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	MS	Run ID:	IC2_080411A		Analysis Date:		04/11/08 11:25 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		55.4	2.00	20.00	37.00	92.0	90	110			
Sulfate		115	6.00	60.00	52.31	104	90	110			

Sample ID:	0804109-02C MSD	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	MSD	Run ID:	IC2_080411A		Analysis Date:		04/11/08 11:39 AM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		55.3	2.00	20.00	37.00	91.4	90	110	0.220	20	
Sulfate		115	6.00	60.00	52.31	104	90	110	0.00838	20	

Sample ID:	CCV2-080411	Batch ID:	R37135		TestNo:		E300		Units:		mg/L
SampType:	CCV	Run ID:	IC2_080411A		Analysis Date:		04/11/08 02:39 PM		Prep Date:		04/11/08
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride		9.98	1.00	10.00	0	99.8	90	110			
Sulfate		30.5	3.00	30.00	0	102	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_080411A

Sample ID:	ICV-080411	**Batch ID:**	R37130		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	ICV	**Run ID:**	TITRATOR_080411A		**Analysis Date:**		04/11/08 08:53 AM		**Prep Date:**		04/11/08
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		9.97	0	10.00	0	99.7	99	101			
Sample ID:	0804107-01B DUP	**Batch ID:**	R37130		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	DUP	**Run ID:**	TITRATOR_080411A		**Analysis Date:**		04/11/08 09:09 AM		**Prep Date:**		04/11/08
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		7.30	0	0	7.280				0.274	5	
Sample ID:	CCV1-080411	**Batch ID:**	R37130		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	CCV	**Run ID:**	TITRATOR_080411A		**Analysis Date:**		04/11/08 09:11 AM		**Prep Date:**		04/11/08
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		7.01	0	7.000	0	100	97.1	102.9			
Sample ID:	0804110-06B DUP	**Batch ID:**	R37130		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	DUP	**Run ID:**	TITRATOR_080411A		**Analysis Date:**		04/11/08 09:18 AM		**Prep Date:**		04/11/08
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		7.06	0	0	7.030				0.426	5	
Sample ID:	CCV2-080411	**Batch ID:**	R37130		**TestNo:**		M4500-H+ B		**Units:**		pH Units
SampType:	CCV	**Run ID:**	TITRATOR_080411A		**Analysis Date:**		04/11/08 09:21 AM		**Prep Date:**		04/11/08
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
pH		6.99	0	7.000	0	99.9	97.1	102.9			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_080411B

Sample ID:	ICV-080411	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	ICV	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 10:45 AM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	5.36	20.0	0							
Alkalinity, Carbonate (As CaCO3)	92.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	98.0	20.0	100.0	0	98.0	98	102			

Sample ID:	MBLK-080411	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	MBLK	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 10:54 AM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	20.0								
Alkalinity, Carbonate (As CaCO3)	ND	20.0								
Alkalinity, Hydroxide (As CaCO3)	ND	20.0								
Alkalinity, Total (As CaCO3)	ND	20.0								

Sample ID:	LCS-080411	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	LCS	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 10:57 AM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	50.6	20.0	50.00	0	101	74	129			

Sample ID:	0804107-01C DUP	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 11:12 AM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	250	20.0	0	250.2				0.193	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	250	20.0	0	250.2				0.193	20	

Sample ID:	CCV1-080411	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 11:56 AM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	11.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	87.4	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	98.4	20.0	100.0	0	98.4	90	110			

Sample ID:	0804110-06B DUP	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	DUP	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 12:19 PM	Prep Date:	04/11/08

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	171	20.0	0	171.1				0.0840	20	
Alkalinity, Carbonate (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	171	20.0	0	171.1				0.0840	20	

Sample ID:	CCV2-080411	Batch ID:	R37136	TestNo:	M2320 B	Units:	mg/L
SampType:	CCV	Run ID:	TITRATOR_080411B	Analysis Date:	04/11/08 12:25 PM	Prep Date:	04/11/08

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_080411B

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	13.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	82.7	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	96.2	20.0	100.0	0	96.2	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

CLIENT: Larson & Associates
Work Order: 0804107
Project: JHHC-Penrose Federal

ANALYTICAL QC SUMMARY REPORT

RunID: WC_080414B

Sample ID:	MB-080414	**Batch ID:**	TDS_W-04/14/08	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	MBLK	**Run ID:**	WC_080414B	**Analysis Date:**	04/14/08 09:50 AM			**Prep Date:**	04/14/08		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		ND	10.0								

Sample ID:	LCS-080414	**Batch ID:**	TDS_W-04/14/08	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	LCS	**Run ID:**	WC_080414B	**Analysis Date:**	04/14/08 09:50 AM			**Prep Date:**	04/14/08		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		761	10.0	745.6	0	102	70	126			

Sample ID:	0804107-01C DUP	**Batch ID:**	TDS_W-04/14/08	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	DUP	*Run ID:*	WC_080414B	**Analysis Date:**	04/14/08 09:50 AM			**Prep Date:**	04/14/08		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		744	10.0	0	776.0				4.21	5	

Sample ID:	0804110-06B DUP	**Batch ID:**	TDS_W-04/14/08	**TestNo:**	M2540C			**Units:**	mg/L		
SampType:	DUP	**Run ID:**	WC_080414B	**Analysis Date:**	04/14/08 09:50 AM			**Prep Date:**	04/14/08		
Analyte		**Result**	**RL**	**SPK value**	**Ref Val**	**%REC**	**LowLimit**	**HighLimit**	**%RPD**	**RPD Limit**	**Qual**
Total Dissolved Solids (Residue, Fi		1260	10.0	0	1269				0.395	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
DF	Dilution Factor	RL	Reporting Limit
J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
MDL	Method Detection Limit	N	Parameter not NELAC certified
ND	Not Detected at the Method Detection Limit		

Appendix D

Photographs

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

1. Location Sign Looking East, January 21, 2008.

2. Soil Remediation at Tank Battery Looking Southeast, January 21, 2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

3. Tank Battery Soil Remediation Looking East, January 28, 2008.

4. Tank Battery Soil Remediation Looking East, January 28, 2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

5. Tank Battery Soil Remediation Looking Northeast, January 28, 2008.

6. Tank Battery Soil Remediation Looking East, January 28, 2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

7. Tank Battery Soil Remediation Looking West, January 28, 2008.

8. Tank Battery Soil Remediation Looking Northeast, February 1, 2008.

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PENROSE FEDERAL TANK BATTERY

9. Tank Battery Soil Remediation Looking North, Feruary 1, 2008.

10. Soil Remediation West of Tank Battery Looking East, February 1, 2008.

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11. Pit Excavation Looking North, February 1 2008.

12. Pit Excavation Looking Southeast, February 1, 2008.

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PENROSE FEDERAL TANK BATTERY

13. Pit Excavation Looking Northeast, February 11, 2008.

14. Pit Excavation Liner Installation Looking Southwest, February 19, 2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

15. Pit Excavation Liner Installation Looking Southwest, January 28, 2008.

16. Pit Excavation Liner Installation Looking West, January 28, 2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY

17. Pit Excavation Filling Looking North, January 28, 2008.

18. Pit Excavation Filling Looking North, January 28, 2008.

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PENROSE FEDERAL TANK BATTERY

19. Pit Excavation Filling Looking West, January 28, 2008.

20. Pit Excavation Filling Looking West, January 28, 2008.

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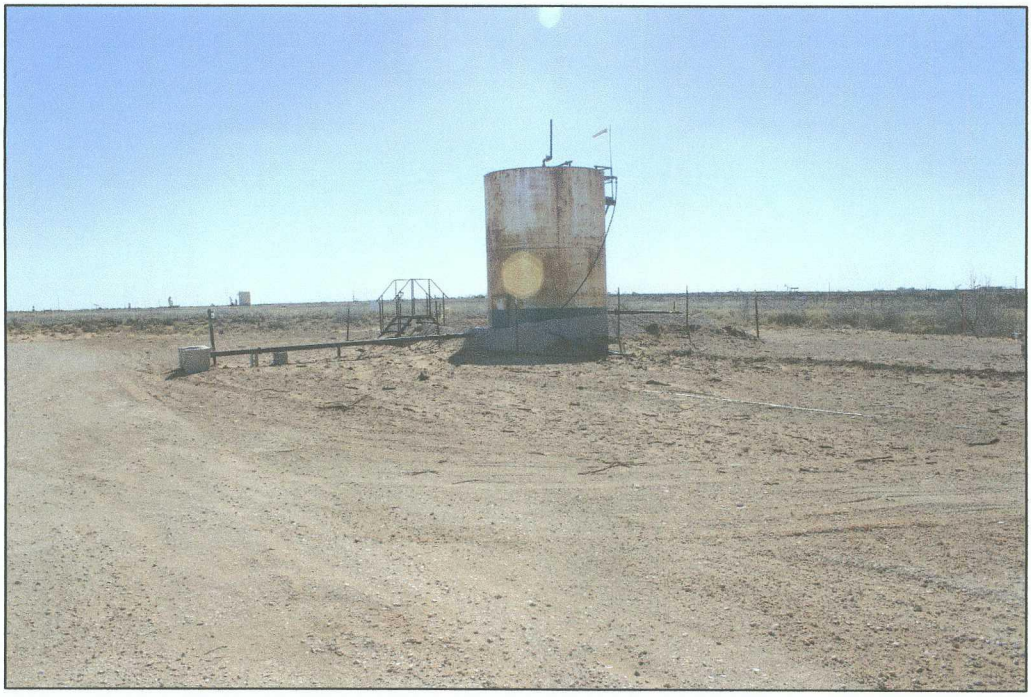
PENROSE FEDERAL TANK BATTERY

21. Finished Pit Excavation Looking Southeast, January 28, 2008.

22. Finished Pit Excavation Looking Northeast, January 28, 2008.

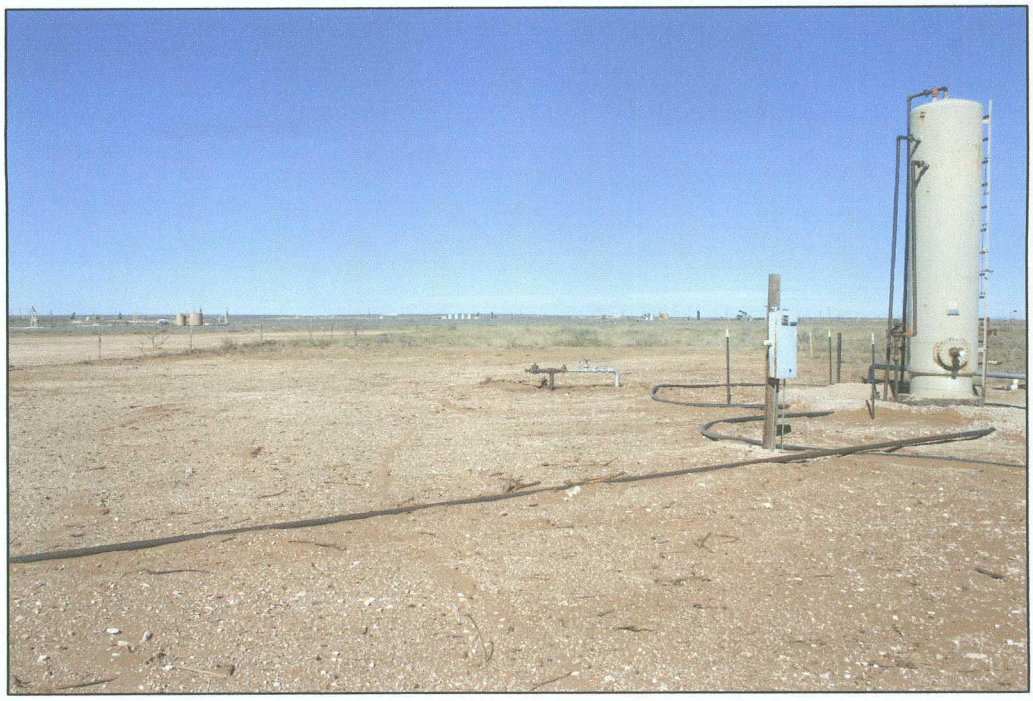
JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY



23. Finished Tank Battery Remediation Looking North, March 7, 2008.

24. Finished Tank Battery Remediation Looking East, January 28 ,2008.

JOHN H. HENDRIX CORPORATION
PENROSE FEDERAL TANK BATTERY



25. Finished Tank Battery Remediation Looking West, January 28, 2008.

26. Finished Remediation West of Tank Battery Looking Southwest, March 7, 2008.

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PENROSE FEDERAL TANK BATTERY

27. Finished Pit Excavation Looking Southwest, March 7, 2008.