E. L. Harrod Lease (Located in Section 5, T16S, R35E of Lea County, NM)

Spill Assessment Work Plan

Presented to:

Nadel & Gussman Permian LLC.

601 North Marienfeld, Suite 508 Midland, Texas 79701

Prepared by:

Phoenix Environmental LLC.

P.O. Box 1856 *Hobbs, New Mexico* 88240

ficility-FPA C0604036924 application - pPA C0604037054



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IMPORTANT NOTICE:

Phoenix Environmental LLC., ("Phoenix") with offices at 2113 French Drive, Hobbs, New Mexico 88241 (the Company), has prepared this "Spill Assessment Work Plan" for the E. L. Harrod Lease, to the best of its ability. No warranty, expressed or implied, is made or intended. The report was prepared for Nadel & Gussman Permian LLC., with offices at 601 North Marienfeld, Suite 508, Midland, Texas 79701, (the Client). All information disclosed in this plan is for internal purposes only and is considered confidential. By accepting this document, the recipient agrees to keep confidential the information contained herein. The recipient further agrees not to copy, reproduce or distribute to any third party this project plan in whole or in part, without express written permission from the Company or Client.



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Section I

Spill Overview

The E. L. Harrod Lease spill site will be handled as a release as opposed to a routine drilling pit closure. The drilling fluids were lost when the back of the reserve pit was inadvertently cut and the drilling fluids were released into an old caliche pit next to the reserve pit location. The problem then became an issue of concern in groundwater contamination from hydrocarbons or chlorides from the fluids, which impacted the soils in the caliche pit.

The New Mexico Oil Conservation Division ("NMOCD") inspected the release on October 12, 2001. A letter or Notice of Violation was sent to Nadel & Gussman Permian LLC., in November 2001, detailing requirements for remediating the site.

The NMOCD sent another letter on April 22, 2003, reaffirming the release and requesting compliance with the initial letter. Phoenix submitted a preliminary "Work Plan" on the release on May 1, 2003. Approval for the "Work Plan" was received on May 8, 2003. This "Spill Assessment Work Plan" is an answer or extension to the NMOCD letter dated May 8, 2003, outlining proposed remediation of impacted soils to alleviate any concerns for groundwater chloride contamination exceeding the New Mexico Water Quality Control Commission ("WQCC") groundwater standard of 250 mg/l.

Discovery

The E. L. Harrod Lease site is located in the SW/SW of Sec. 5, T16S, and R35E in Lea County, New Mexico. The initial reserve drilling pit site is 122 feet by 121 feet in area. The caliche pit impacted area is 69 feet by 171 feet. The GPS location of the spill site is $(32^\circ - 56' - 45'')$ N and $(103^\circ - 29' - 12'')$ W with an elevation of 4042 ASL.

The lands primary use is for the production of oil and gas and domestic pasture for ranching operations. The depth to ground water data available from the State Engineers Office is in the <u>59 feet range</u>! The elevation at the bottom of the caliche pit is 11 feet lower than that of the reserve drilling pit area. This ultimately drops the depth to groundwater below <u>50 feet</u> and increasing the ranking criteria for maximum points for the release. It is over one thousand feet to the nearest wellhead (windmill) used for domestic water purposes and the nearest water body is greater than 1,000 feet and is not of concern. Please note from the following field and lab analyses that the main concern is for chlorides and that the hydrocarbon constituents do not pose a problem.



Sample Point	Description	1 foot	2 feet	3 Feet	4 Feet	5 Feet
Background	Northwest Corner 32° - 56' - 45" N 103° - 29' - 12" W 4035 ASL	ND				
I 1' Drill Mud	Southwest Corner 32° - 56' - 45" N 103° - 29' - 14" N 4028 ASL	7950 ppm				3810 ppm
2 1' Drill Mud	Southeast Corner 32° - 56' -45" N 103° - 29' - 13" W 4042 ASL	2320 ppm			2660 ppm	
3 1.5' Drill Mud	Northeast Corner 32° - 56' - 45" N 103° - 29' 12" W 4043 ASL	3770 ppm		653 ppm		
4 2.5' Drill Mud	Northwest Corner 32° - 56' - 46" N 103° - 29' 13" W 4045 ASL	5100 ppm			4590 ppm	
5 4' Drill Mud	Pit Center 32° – 56' – 45" N 103° - 29' 13" W 4044 ASL	6260 ppm		7460 ppm		
6 1' Drill Mud	North End West Spill 32° - 56' - 46" N 103° - 29' 14" W 4040 ASL	3620 ppm		2500 ppm		
7	Center West Spill Area 32° – 56' 45" N 103° – 29' 14" W	6560 ppm		5500 ppm		
<u>2.75' Drill Mud</u> 8	4041 ASL South End West Spill 32° - 56' - 45" N 103° - 29' 15" W		990 ppm	3490 ppm		
1' Drill Mud	4038 ASL					l

Chloride Analyses: (Ion Chromatograph Solid – EPA 300.0)

Field TPH Analysis Results (Please refer to attached field analysis sheets).

Sample Point	1 foot	Composite – 5 grab samples around spill area (25' radius)
Reserve Drilling Pit – Center	37 ppm	14 ppm
Spill – Caliche Pit - Center	28 ppm	10 ppm

Assessment and Conclusions:

The NMOCD regulates the remediation and disposal of non-domestic wastes resulting from the oil and gas industry. In addition, the NMOCD administers all Water Quality Act regulations pertaining to surface and ground water except sewage for the oil and gas industry. This authority includes the disposition of non-domestic, non-hazardous wastes at oilfield facilities.

To restate the potential of concern, the chloride concentration is the main concern for the remediation of the spill. Utilizing the spill areas listed in the Discovery Section, the



reserve drilling pit site is 122 feet by 121 feet in area and the caliche pit impacted area is 69 feet by 171 feet. Utilizing a composite number of 2 feet of drilling mud over these areas, there would be approximately 1968 cubic yards of drilling mud and cuttings with high chloride concentrations. Extrapolating the depth of the underlying impacted caliche for an overall composite depth of 5 feet, there is another 4919 cubic yards of impacted caliche with mid to high levels of chloride concentrations.

We would propose to transport the combined total of yardage estimated at 6887 cubic yards for disposal at a permitted NMOCD facility. We would then propose to finish the excavation of the caliche pit to make certain that any chloride impacted soils with concentrations above 250 ppm be placed in the excavated reserve drilling pit that has a clay bottom installation. The compacted clay bottom will be 1 foot thick. Following the placement of the impacted soils in a convex lens shape into the reserve drilling pit, an estimated volume of 2,500 to 3,000 cubic yards, we are proposing the completion of the project utilizing one of the following three options:

Option 1) We would cap the reserve drilling pit impacted soils with 1 foot of compacted clay and finish backfilling from the caliche pit, a minimum of three feet of soil (caliche) and contour in a crown to discourage ponding. The caliche pit would then be contoured and filled from within the pit area.

Option 2) We would place the impacted soils in the bottom of the reserve drilling pit, but we would use a spray-on urethane liner over scrim of approximately 30 to 60 mils in thickness to create an impermeable barrier over the impacted soils, then backfill with 1 foot of sand and finish backfilling with caliche. Geomembranes in landfills and subsurface barriers are normally a minimum of 30 mils (0.76 mm) in thickness. We would propose doubling this amount to insure the integrity of the liner.

Option 3) We would utilize the same clay bottom listed above and placement of the impacted soils, but as a viable option to the above, Phoenix has a patented technology, called Natural Analog System ("NAS"), that it controls in the Permian Basin. The NAS artificially induces geologic and chemical processes to form natural products with the goal of reducing or eliminating permeability and porosity (natural or artificially created) in host soil and rock. The chemical process utilizes an analog of a natural geologic process by which unconsolidated sediments are gradually converted to rock by cementation and pore filling. In general, the process involves induced precipitation of calcium carbonate (in the form of calcite) in quantities sufficient to fill cracks, fissures or other voids in existing rock or soil layers.

The technological strategy emphasizes compatibility with natural conditions, and utilizes a natural analog process—thus the results and predicted durability of a treatment can be evaluated by comparison with natural geologic examples. The chemical process stiffens of solidifies soil/rock masses in a way that is analogous to the natural formation of sedimentary rock.



The above options leave a portion of the impacted soils that will be entombed on-site instead of hauling off-site for disposal. The drilling mud and cuttings that are normally exempted, since they are extremely high in chloride concentrations, would be hauled along with a large portion of the impacted soils. The remainder of the impacted soils would be entombed in the reserve-drilling pit on-site.

Any one of these technologies could be used throughout the Permian Basin to control the possible contamination of ground water due to chlorides or hydrocarbons. All are designed to shed any water from entering the entombed impacted soils around the subsurface barrier. The Natural Analog Systems could provide a technology for chloride contamination by the conversion of the soils on-site, especially caliche, into calcite and avoid contaminating precious groundwater.

We feel that anyone of the above approaches would alleviate any future potential for groundwater contamination from the release. Once all the concerns of the NMOCD have been addressed, a final site closure report will be prepared to include a summary; third party laboratory analyses; and site maps and site photos.

Certification:

The following Phoenix Environmental personnel have reviewed this report and verified that to the best of their knowledge the contents are true and correct.

Allen Hodge, REM Senior Project Manager Phoenix Environmental LLC

Signature: /

Registered Environmental Manager #7096 National Registry of Environmental Professionals

Charles E. Slavens, REM Senior Project Manager Phoenix Environmental LLC. Signature: (

Registered Environmental Manager #7093 National Registry of Environmental Professionals



Section II



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Phoenix Environmental, LLC. P.O. Box 1856 – 2113 French Drive Hobbs, New Mexico 88241 505.391.9685 – FAX: 505.391.9687

SOIL ANALYSIS REPORT

Date: May 22, 2003 Client: Nadel & Gussman Permian LLC. Supervisor: Allen Hodge Sample Matrix: Soil Facility: E. L. Harrod Lease Test Method: EPA 418.1 Order No.: Sample Received: Intact on site

<u>Sample</u>	<u> </u>		<u>CL</u>		<u>Depth</u>	<u>Location</u>
#1	37	ppm		ррт	1 foot	Reserve Drilling Pit - Center
#2	14	ppm		ppm	1 foot	Composite – Drilling Pit
#3		ppm		ppm		
#4		ppm		ppm		
#5		ppm		ppm		
#6		ppm		ppm		
#7		ppm		ppm		
#8		ppm		ppm		
#9		ppm		ppm		
#10		ppm		ppm		

COMMENTS: Samples do not appear to pose a problem for spill remediation.

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SOIL ANALYSIS REPORT

Date: May 22, 2003 **Client:** Nadel & Gussman Permian LLC. **Supervisor:** Allen Hodge **Sample Matrix:** Soil Facility: E. L. Harrod Lease Test Method: EPA 418.1 Order No.: Sample Received: Intact on site

<u>Sample</u>	<u>ТРН</u>	<u>CL</u>		<u>Depth</u>	<u>Location</u>
#1	28	ppm	ррт	1 foot	Caliche Pit - Center
#2	10	ppm	ррт	1 foot	Composite – Caliche Pit
#3		ppm	ррт		
#4		ppm	ррт		
#5		ppm	ppm		
#6		ppm	ppm		
#7		ppm	ppm		
#8		ppm	ppm		
#9		ppm	ppm		
#10		ppm	ppm		

COMMENTS: Samples do not appear to pose a problem for spill remediation.

Anachem,	Inc.				Date:	09-Ju	n-03
CLIENT:	Phoenix Env. LLC			C	lient Sample ID:	Test I	lole #1@-1f: SWC
Lab Order:	0306026				Location:	E.L. H	larrod Lease, Lea Co., NM
Project:	Nadel & Gussman				Collection Date:	6/2/20	003
Lab ID:	0306026-01A				Matrix:	SOIL	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
ION CHROMA	TOGRAPH SOLID (EPA :	300.0) 7950	800		mg/Kg	1	Analyst: KAH 6/6/2003

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.				Date:			09-Jun-03		
CLIENT:	Phoenix Env. LLC			C	lient Sample I	D: Test I	Hole #1@-5ft SWC		
Lab Order:	0306026				Locatio	n: E.L. 1	Harrod Lease, Lea Co., NM		
Project:	Nadel & Gussman			I	Collection Da	te: 6/2/2	003		
Lab ID:	0306026-02A				Matr	ix: SOIL	,		
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed		
ION CHROMA Chloride	TOGRAPH SOLID (EPA :	300.0) 3810	800		mg/Kg	1	Analyst: KAH 6/6/2003		

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E. Value above quantitation range

- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.				Date:	09-Jun-03		
CLIENT:	Phoenix Env. LLC		C	lient Sample 1D:	Test I	lole #2@-1ft SEC	
Lab Order:	0306026			Location:	E.L. H	larrod Lease, Lea Co., NM	
Project:	Nadel & Gussman			Collection Date:	6/2/20	003	
Lab ID:	0306026-03A			Matrix:	SOIL		
Analyses		Result	Limit Qual	Units	DF	Date Analyzed	
ION CHROMA	TOGRAPH SOLID (EPA	300.0)				Analyst: KAH	
Chloride	•	2320	800	ma/Ka	1	6/6/2003	

Qualifiers:

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- . Value exceeds Maximum Contaminant Level
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- s Spike Recovery outside accepted recovery limits
- в Analyte detected in the associated Method Blank
- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.			Date:			09 -J u	0 9-Jun -03		
CLIENT:	Phoenix Env. LLC			C	lient Sample ID	Test I			
Lab Order:	0306026				Location	E.L. F	Harrod Lease, Lea Co., NM		
Project:	Nadel & Gussman				Collection Date	6/2/20	003		
Lab ID:	0306026-04A				Matrix	SOIL			
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed		
ION CHROMA	TOGRAPH SOLID (EPA 3	100.0)					Analyst: KAH		
Chloride	•	2660	800		mg/Kg	1	6/6/2003		

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
 J Analyte detected below quantitation
- I Analyte detected below quantitation limits
 S pike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.				Date: 09-Jun-03				
CLIENT:	Phoenix Env. LLC			C	lient Sample ID:	Test H	Hole #3@-1ft NEC	
Lab Order:	0306026				Location:	E .L. E	Harrod Lease, Lea Co., NM	
Project:	Nadel & Gussman				Collection Date:	6/2/20	003	
Lab ID:	0306026-05A				Matrix:	SOIL		
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed	
ION CHROMA	TOGRAPH SOLID (EPA :	100.0) 3770	800	a <u>a</u>	mg/Kg	1	Analyst: KAH 6/6/2003	

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J
 Analyte detected below quantitation limits

 S
 Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Anachem,		Date:			09-Jun-03		
CLIENT:	Phoenix Env. LLC			c	lient Sample ID:	Test I	Iole #3@-3ft NEC
Lab Order:	0306026				Location:	E.L. F	Iarrod Lease, Lea Co., NM
Project:	Nadel & Gussman				Collection Date:	6/2/20	003
Lab ID:	0306026-06A				Matrix:	SOIL	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
ION CHROMA	TOGRAPH SOLID (EPA :	300.0) 653	80.0		ma/Ka	1	Analyst: KAH 6/6/2003

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Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.

Date: 09-Jun-03

ION CHROMA	IOGRAPH SOLID (EPA 3	100.01					Analyst: KAH
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
Lab ID:	0306026-07A				Matrix:	SOIL	
Project:	Nadel & Gussman				Collection Date:	6/2/20()3
Lab Order:	0306026				Location:	E.L. H	arrod Lease, Lea Co., N
CLIENT:	Phoenix Env. LLC			C	lient Sample ID:	Test H	ole #4@-1ft NWC

Qualiflers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J
 Analyte detected below quantitation limits

 S
 Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.

Date: 09-Jun-03

	TOGRAPH SOLID (EPA 3	190.0) 4590	800		mg/Kg	4	Analyst: KAH 6/6/2003
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
Lab ID:	0306026-08A				Matrix	SOIL	
Project:	Nadel & Gussman				Collection Date:	6/2/20	103
Lab Order:	0306026				Location	E.L. H	larrod Lease, Lea Co., NI
CLIENT:	Phoenix Env. LLC			C	lient Sample ID:	Test H	lole #4@-4ft NWC

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery cutside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem,	Inc.				D	ate:	09-Ju	n-03
CLIENT:	Phoenix Env. LLC			С	lient Sample	ID:	Test F	Iole #5@-1ft Center
Lab Order:	0306026				Locat	io n :	E.L. F	Iarrod Lease, Lea Co., NM
Project:	Nadel & Gussman				Collection D	ate:	6/2/20	103
Lab ID:	0306026-09A				Mat	rix:	SOIL	
Analyses		Result	Limit	Qual	Units		DF	Date Analyzed
ION CHROMA Chloride	TOGRAPH SOLID (EPA (100.0) 6260	800		mg/Kg		1	Analyst: KAH 6/6/2003

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Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range

- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem,	Inc.				Date	: 09-Ju	n-03
CLIENT:	Phoenix Env. LLC			C	lient Sample ID	: Test H	Iole #5@-3ft Center
Lab Order:	0306026				Location	E .L. H	larrod Lease, Lea Co., NM
Project:	Nadel & Gussman				Collection Date	: 6/2/20	03
Lab ID:	0306026-10A				Matrix	: SOIL	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
ION CHROMA Chloride	TOGRAPH SOLID (EPA 3	1 00.0) 7460	800		mg/Kg	1	Analyst: KAH 6/6/2003

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem, Inc.

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Date: 09-Jun-03

CLIENT:	Phoenix Env. LLC			Client Sa	mple ID:	Test H	lole #6@-1ft WSA-N
Lab Order:	0306026			J	ocation:	E.L. H	larrod Lease, Lea Co., NM
Project:	Nadel & Gussman		,	Collect	ion Date:	6/2/20	03
Lab ID:	0306026-11A		-		Matrix:	SOIL	
Analyses		Result	Limit (Jual Units		DF	Date Analyzed
ION CHROMA	TOGRAPH SOLID (EPA 3	300.0)					Analyst: KAH
Chloride		3620	800	mg/Kg		1	6/6/2003

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

	TOGRAPH SOLID (EPA 3	00.0)					Analyst KAH
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
Lab ID:	0306026-12A			_	Matrix:	SOIL	
Project:	Nadel & Gussman				Collection Date:	6/2/20	03
Lab Order:	0306026				Location:	E.L. H	arrod Lease, Lea Co., N
CLIENT:	Phoenix Env. LLC			С	lient Sample ID:	Test H	ole #6@-3ft WSA-N

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Date: 09-Jun-03

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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Anachem,	, Inc.				Date:	09-Ju	1-03	
CLIENT: Lab Order: Project: Lab ID:	Phoenix Env. LLC 0306026 Nadel & Gussman 0306026-13A			C	lient Sample ID: Location: Collection Date: Matrix:	E.L. H 6/2/20	larrod Lease, L	
Analyses	·····	Result	Limit	Qual	Units	DF	Date Analy	yzed
ON CHROMA Chloride	TOGRAPH SOLID (EP)	A 300.0) 6560	800		mg/Kg	1	Anal 6/6/2003	yst: KAH
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Anachem	, Inc.				Date:	09-Jui	1-03
CLIENT: Lab Order: Project: Lab ID:	Phoenix Env. LLC 0306026 Nadel & Gussman 0306026-14A			C		E.L. H 6/2/20	lole #7@-3ft WSA-C larrod Lease, Lea Co., NN 03
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
ON CHROMA Chioride	TOGRAPH SOLID (EPA 3	00.0) 5500	80.0		mg/Kg	1	Analyst: KAH 6/6/2003
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Analyses	0306026-15A GRAPH SOLID (EPA 30	Result 30.0) 990	Limit 80.0	Qual	Uaits mg/Kg		DF 1		nalyzed Anelyst: KAH
ON CHROMATOC Chloride	BRAPH SOLID (EPA 30			Qual				Ą	Analyst: KAH
Chioride	JRAPH SOLID (EPA 30		80.0		mg/Kg		1		
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Qualifiers: * E	Value exceeds Maximum (Value above quantitation n	range			н н		for prepar	ation or analy	thod Blank vsis exceeded
J S	Analyte detected below qua Spike Recovery outside acc		nits		ND N	iot Detected a	t the Repa	orting Limit	Page 15 of 1

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Qualifiers: Value exceeds Maximum Consuminant Level B Analyse detected in the associated Method Blank E Value above quantitation mange H Holding times for propring in or analysis exceeded	Anachem,	Inc.					Date:	09-Jun	-03	
Lab JD: D306026-16A Matrix: SOIL Analyses Result Limit Qual Units DF Date Analyzed ION CHROMATOGRAPH SOLID (EPA 300.0) Chierdide Analyse: KAH Analyse: KAH Chierdide 3490 80.0 mg/Kg 1 6/6/2003 Out three exceeds Maximum Contaminant Level B Nubre detected in the associated Method Blank H Holding times for propuntion or analysis accorded ND ND Detected the Reporting Limit	Lab Order:	0306026			C		Location:	E.L. H	arrod Lease, I	
Qualifiers: • Value secceds Maximum Contaminant Level B Analyte detected in the associated Method Blank B Value secceds Maximum Contaminant Level B Analyte detected in the associated Method Blank H Holding times for preparities or analysis H Holding times for preparities or analysis	Project: Lab ID:					Conec			03	
Qualifiers: * Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected at the Reporting Limit NO NO	Analyses	······	Result	Limit	Quai	Units		DF	Date Ana	lyzed
Qualifiers: • Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank B Yalue above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit	ION CHROMAT Chioride	OGRAPH SOLID (EPA 3	100.0) 3490	80.0		mg/Kg		1		llyst: KAH
Qualifiers: • Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank B Yalue above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit	6 									
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S Spike Recovery outside accepted recovery limits										

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Anachem,	Inc.				Da	i te: 09-1	hun-03
CLIENT:	Phoenix Env. LLC			C	lient Sample	ID: Bac	kground@-1ft NWC-Pit
Lab Order:	0306026				Locati	on: E.L	. Harrod Lease, Lea Co., NM
Project:	Nadel & Gussman				Collection Da	ite: 6/2.	/2003
Lab ID:	0306026-17A				Mat	rix: SO	IL.
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
ION CHROMA Chioride	TOGRAPH SOLID (EPA S	800.0) ND	8.00		mg/Kg	1	Analyst: KAH 6/6/2003

Qualifiers:

- ٠ Value exceeds Maximum Contaminant Level
- E Value above quantitation range
-) Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank

Date: 09-Jun-03

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 17 of 17

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Anachem, Inc.

Date: 09-Jun-03

CLIENT: Phoenix Fnv. LLC Work Order: (1306026 Project: Nadel & Gussman	Phoenix Fuv. LLC 0306026 Nadel & Gussman					ANAL	YTIC/	AL QC SU BatchID:	ANALYTICAL QC SUMMARY REPORT BatchID: R24051	REPO	RT
Sample ID MB-R24051 Client ID:	SampType: MBLK Hatch ID: R24051	TestCode: Ic_S TestNo: E300	stCode: lc_S TestNo: E300.0	Units: mg/Kg		Prep Date: Analysis Date:	e: 6/6/2003	5	RunNo: 24061 SeqNo: 268780	80	
Analyte Chloride	Resut	РОІ. 8.00	SPK value	SPK Ref val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID LCS Client ID:	SampType: LCS Balch ID: R24051	TestCode: Ic_S TestNo: E300	stCode: ic_S TestNo: E300.0	Units: mg/Kg		Prep Date: Analysis Date: 6/6/2003	e: 6/6/20(5	RunNo: 24051 SeqNo: 258794	<u>र</u> ह	
Anatyte Chloride	Result 5.200	POL 1.00	SPK value 5	SPK Ref Val 0	%REC 104	LowLimit 80	HighLimit 120	LowLmit HighLimit RPD Ref Val 80 120 0	%RPD 1	RPDLimit	Qual
Sample ID LCSD Client ID:	SampType: LCSD Batch ID: R24051	TestCode: ic_S TestNo: E300	stCode: ic_S TestNo: E300.0	Units: mg/Kg		Prep Date: Analysis Date:	e: 6/6/2003	ų	RunNo: 24051 SeqNo: 258795	95	
Analyte Chloride	Result 4.800	POL 1.00	SPK value 5	SPK Ref Val 0	%REC 96	LowLimit HighLimit 80 120	HighLimit 120	RPD Ref Val 5.2	%RPD F	RPDLimit 15	Quaj
Sample ID 0306026-01AMS Client ID: Test Hole #1@-1ft S	SampType: MS S Batch ID: R24051	TesiCode: ic_S TesiNo: E300	isiCode: ic_S TesiNo: E300.0	Units: mg/Kg		Prep Date: Analysis Date:	. 6/6/2003		RunNo: 24051 SeqNo: 258783	- 8	
Analyte Chloride	Result 12400	PQL 800	SPK value 5000	SPK Ref Val 7950	%REC 89	LowLimit 80	HighLimit 120	RPD Ref Val	%RPD F	RPDLimit	Qual
Sample ID 0306026-01AMSD Client ID: Test Hole #1@-1ft S	SampType: MSD S Batch ID: R24051	TestCoda: ic_S TestNo: E300	stCode: ic_S TestNo: E300.0	Units: mg/Kg		Prep Date: Analysis Date:	6/6/2003	6	RunNo: 24051 SeqNo: 258764	- 3	
Anaiyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD R	RPDLimit	Qual
Chloride	12800	800	5000	7950	97	80	120	12400	3.17	ଝ	1

Analyte detected below quantitation limits
 Spike Recovery outside accepted recovery limits

Holding times for preparation or analysis exceeded
 R PD outside accepted recovery limits

E Value above quantitation range ND Not Detected at the Reporting Limit Qualifiers:

CLIENT: Work Order: Project:	Phoenix Env. LLC 0306026 Nadel & Gussman	rv. LLC ussman						ANAL	YTIC/	ANALYTICAL QC SUMMARY REPORT Batchid: R24052	JMMAR R24052	Y REPO	RT
Sample ID MB-R24052 Client ID: Analyte Cherdre	14052	SampType: MBLK Batch ID: R24052 Result ND	MBLK R24052 Result ND	TestCode: Ic_S TestNo: E300 PQL SPK v A 00	stCode: ic_S TestNo: E300.0 QL SPK value 00	Units: mg/Kg SPK Ref Val	%REC	Prep Date: Analysis Date: LowLimit Hi	e: 6/6/2003 HighLimit F	Prep Date: vnatysis Date: 6/6/2003 LowLimit HighLimit RPD Ref Val	RunNo: 24052 SeqNo: 258796 %RPD RP	052 8796 RPDLimit	Qual
Sample ID LCS Client ID: Analyte Chioride		SampType: LCS Batch ID: R24052 Result	LCS R24052 Result 4.800	TestCode: Ic_S TestNo: E300 PQL SPK v 1.00	stCode: ic_S TestNo: E300.0 Cl. SPK value 00 5	Units: mg/Kg SPK Ref val	%REC	Prep Date: Analysis Date: LowLimit Hi 80	e: e: 6/6/2003 HighLimk F 120	03 RPD Ref val	RunNo: 24052 SeqNo: 258803 %RPD RP	052 6808 RPDLimit	Qual
Sample ID LCSD Client ID: Analyte Chloride		SampType: LCSD Batch ID: R24052 Result 4.800	LCSD R24052 Result 4.800	TestCode: ic_S TestNo: E300 PQL SPK v 1.00	stCode: ic_S TestNo: E300.0 QL SPK value 00 5	Units: mg/Kg SPK Ref Vat	%REC 96	Prep Date: Anatysis Date: LowLimit Hig 80	e: 6/6/2003 9: 6/6/2003 HighLtmit F 120	13 RPD Ref Val 4.8	RumNo: 24052 SeqNo: 258809 %RPD RP	052 8809 RPDLimit 15	Qual
Sampte ID 0306026-11AMS Client ID: Test Hote #6@-1ft Anatyte Chloride	ଜ-11AMS ୦ାର ୫୧ଡ୍ରେ-1ମ	SampType: MS Batch ID: R24052 Result 9140	MS R24052 Result 9140	TestCode: ic_S TestNo: E300 PQL SPK v 800 5	stCode: ic_S TestNo: E300.0 GL SPK value 00 5000	Units: mg/Kg SPK Ref Val 3620	, %REC 110	Prep Date: Anatysis Date: 5/6/200 LowLimit HighLimit 80 120	x: 5.66/2003 HighLimit F 120	03 RPD Ref Val	RunNo: 24052 SeqNo: 258799 %RPD RP	552 1789 RPDLimit	Qual
Sample ID 0306026-11AMSD Client ID: Test Hole #6@-1ft Analyte Chloride	ଜ-11AMSD ble #6@-1ft	SampType: MSD Batch ID: R24052 Result	MSD R24052 Result 8470	TestCode: ic_S TestNo: E300 POL SPK v 800 5	sstCode: ic_S TestNo: E300.0 OL SPK value 800 5000	Units: mg/Kg SPK Ref Val 3620	%REC	Prep Date: Analysis Dete: LowLimit Hij 80	: 6/6/2003 HighLimlt F	Prep Date: Analysis Date: 6/6/2003 LowLimit HighLimit RPD Ref Val 80 120 9140	RunNo: 24052 SeqNo: 258800 %RPD RP 7.61	DLimit 20	Qual

Spike Recovery outside accepted recovery limits Page 2 of 2 Analyte detected below quantitation limits - s

Holding times for preparation or analysis exceeded **KPD** uutside accepted recovery limits H×

E Value above quantitation range ND Not Detected at the Reporting Limit

Qualifiers:

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Purchase Order/Chain Of Custody	8 Prestige Circle, Suite 104, Allen, TX 75002 Phone: 972-727-9003	Bill To: (Buyer)	stchase Order #;	Address:	City, State, Zip:	Phone:		tate: LEM	ALC 2		W-ASM	W-NSM	WSA-C	WSA-C	wSA-5	W5A-5	メシレン				Received By	An B			
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Section III









Photo #1 – Test Hole #1 - Beginning Photo of Sampling On-site - May 22, 2003.



Photo #2 – Close-up of Test Hole #1 - May 22, 2003.





Photo #3 – Test Hole #2 - May 22, 2003.



Photo #4 – Area Between Test Hole #2 & #3 - May 22, 2003.





Photo #5 – Test Hole #3 - May 22, 2003.



Photo #6 – Test Hole #4 - May 22, 2003.





Photo #7 – Test Hole #5 - Center of Pit - May 23, 2003.



Photo #8 – Test Hole #6 - West Spill Area - May 23, 2003.





Photo #9 – Test Hole #6 - North End of West Spill Area - May 23, 2003.



Photo #10 – Test Hole #7 - West Spill Area Center - May 23, 2003.





Photo #11 - West Spill Area View on May 23, 2003.



Photo #12 - West Spill Area View on May 23, 2003.





Photo #13 – Test Hole #8 – South End of West Spill Area on May 23, 2003.



Photo #14 – Test Hole #8 – South End of West Spill Area on May 23, 2003.

