## RECEIVED

By OCD District 1 at 12:34 pm, Aug 28, 2015

# **Corrective Action Plan**

Marathon Road Water Station Marathon Road Lea County, New Mexico **APPROVED** By OCD District 1 at 12:34 pm, Aug 28, 2015

Jam Huye

Prepared August 2015 for: New Mexico Oil Conservation Division



2904 W 2<sup>ND</sup> ST. Roswell NM 88201 (575) 624-2420

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## 1 Summary

Atkins Engineering Associates, Inc. (AEA) submits this Corrective Action Plan as required in NMAC 19.15.29.11 for the release discovered on the property known as Marathon Road Water Station (MRWS). The general coordinates for the station are 32.624903°, -103.514917° and it is located in Section 25, Township 19 South, Range 34 East N.M.P.M., 170 feet from the south line, and 2,237 feet from the west line of said section 25 in Lea County, New Mexico.

AEA was contacted by Zia Water LLLP to investigate a pool of apparent produced water discovered on the property. Upon investigation AEA deduced the dump was caused by unauthorized dumping of produced water behind fresh water filling ports at Marathon Road Water Station. Lea Dumping is believed to have occurred during the night of January 5, 2015-January 6, 2015. On January 6, 2015, AEA submitted a C-141 form in compliance with NMAC 19.15.29.10 and submitted it to the New Mexico Oil Conservation Division (NMOCD) see copy of notification attached in Appendix C. Vacuum extraction of the standing fluid was completed at approximately 12:40pm January 6, 2015. A dig and haul of the grossly contaminated soil was conducted on January 15-16, 2015. A small area of chloride contaminated soil remains. AEA recommends the remaining hot spots be removed, grades be restored, and portions of the affected area be revegetated.

## 2 Introduction

## 2.1 Location and Description

The subject property MRWS, a fresh water station, located south of the intersection of US Hwy 180/62 and Marathon Road. The general coordinate for the station is 32.624903°, - 103.514917°. Driving directions to the station are as follows:

From Hobbs at the intersection of US 180/62/Marland Blvd and Grimes Street, west on US 180/62 for 22.6 miles, south on Marathon Road (Co Rd 27-A) for 0.7 miles to Marathon Road Station on the east side of Marathon Road.

The property landowner is the Bureau of Land Management (BLM) and has a pending least to Zia Water LLLP.

### 2.2 Information Provided to Agency

On January 6, 2015 AEA provided the following information on a C-141 form, attached in Appendix C, to NMOCD as per NMAC 20.6.2.1203:

- 1) Description of Cause of Problem and Remedial Action Taken:
  - a. Unauthorized dumping of apparent produced water behind fresh water filling ports at Marathon Road Water Station (MRWS). Lea County Sheriff contacted who forwarded to NM State Police. Voicemail left at BLM-Carlsbad office. Dumping believed to occur during the night of 1/05/2015-1/06/2015. Vacuum extraction of standing fluid completed at approximately 12:40pm 1/06/2015

- 2) Description of Area Affected and Cleanup Action Taken:
  - a. Approximately 19,000 sq feet located on the south side of the Marathon Road Water Station. Vacuum Extraction and disposal of standing fluids. Fluid and top 1-2" soil samples sent to Hall Environmental Analysis Laboratory for characterization (BTEX, TPH, RCRA Metals, Chlorides-Aqueous; BTEX, TPHsoil). Contractor and disposal options being explored. Soil to be excavated with field screening of VOCs using Photo-ionization detector, regraded and restored to pre-dump condition. Possible fresh water leak in the vicinity of dump on station may result in more standing water on site in dump area.

## 3 Groundwater and Geological Conditions

The site is located approximately 15,000 feet west of the western edge of the Ogallala aquifer and no shallow regional groundwater is expected on site. According to the New Mexico State Engineer's Office there was an observation well installed in 1985. According to the legacy well log found in the archives of the State Engineer drill records, some groundwater was observed between 28-31 feet bgs in a sand bed. This sand bed is recorded on the drilling log to be on top of 60 ft of clay believed to be the Chinle formation. AEA considers this to be perched water and not indicative of groundwater on site. Regional groundwater in the area would be derived from Triassic Santa Rosa sandstone. This formation sits below the Chinle clay. If present water from the Santa Rosa would be expected at depths exceeding 100 feet bgs.

The soil across the site consists of Pyote soil and dune land. The National Resources Conservation Service (NRCS) considers the top 60 inches to be fine sand and fine sandy loam with a 0 - 3 percent slope. Soil has negligible run off and a high water transmitting capacity. Calcium carbonate in site is considered to be 5%, gypsum, 1% with a nonsaline to very slightly saline profile. Minor soil components include Kermit, Maljamar fs, Wink, and the Playas.

## 4 Investigation Activities

On January 6, 2015 AEA responded to document the extent of the dump, supervise vacuum truck activities, and take water and soil samples.

Vacuum removal of fluids was performed by Quality Transport Inc. and soil sampling was performed by AEA.

## 4.1 Soil sampling and Analysis

AEA conducted three (3) rounds of soil sampling: one pre-excavation, and two (2) post-exaction. During excavation of contaminated soil AEA took photo-ionization detector (PID) readings to confirm clean depth was achieved.

### 4.1.1 **Pre Excavation Sampling**

Prior to excavation, AEA took one (1) surface sample and one (1) composite water sample across the dump area. Samples were placed in lab provided containers with preservative as needed, sealed, labeled, and placed on ice. Samples were analyzed for EPA 8015D Diesel and Gasoline Range Organics, 8021B Volatiles (water samples), EPA 300 Chloride, EPA 7470 Mercury, and 6010B total metals. Table 2 summarized the lab results below:

ID	Matrix Constitute		Result			
		Diesel Range Organics	3,700 mg/L			
		Gasoline Range Organics	57 mg/L			
Composite 1	Water	Diesel Range Organics     3,700 mg/L       Gasoline     Range     57 mg/L				
		40,000				
		Diesel Range Organics	19,000 mg/Kg			
		Benzene	19			
Composite 2	Soil	Toluene 51				
		Gasoline OrganicsRange Range57 mg/LBenzene4,100 ug/LToluene4,700 ug/LEthylbenzene650 ug/LTotal Xylenes3,000 ug/LChloride40,000Diesel Range Organics19,000 mg/KgGasoline OrganicsRange 				
		Total Xylenes	65			
		Chloride	27,000			

Table	1.
1 4010	<b>.</b> .

All heavy metal detections were below action levels. Soil and water samples revealed high amounts of chloride and hydrocarbon contamination.

### 4.1.2 Excavation and Post Excavation Sampling

On January 15-17, 2015, AEA personal oversaw excavation of contaminated soil and took additional soil samples. AEA visually inspected soil and directed excavation until visually contaminated soils were removed. Soils were removed using a back hoe excavator, placed into belly dump trucks, and hauled to a permitted disposal facility. Once visual contamination was no longer present AEA used a calibrated PID to field screen soil to determine where additional excavation was necessary. Eight (8) soil samples were taken at 0.5 feet to 1.5 feet below pre-excavation surface across the dump area, see Figure 2 Site Map and Sampling Locations. Samples analyzed for TPH, VOCs, and Chlorides, sample results are listed in Table 2:

Sample ID	Constituent	Detection (mg/kg)	Action Limit (mg/kg)	
SS01	DRO	27	100	
	Chloride	1,800	1,000	
SS02	Chloride	170	1,000	
SS03	Chloride	1,100	1,000	
SS04	Chloride	2,600	1,000	
SS05	Chloride	290	1,000	
SS06	Chloride	81	1,000	
SS07	Chloride	350	1,000	
SS08	DRO	39	100	
	Chloride	450	1,000	

Table
-------

Total TPH detections were below action levels of 100 mg/kg, and total BTEX detections were below action levels of 50 mg/kg. Chloride levels above 1000 mg/kg are located in a depressed area between SS01 and SS04. This area contained the majority of the dumped water. Due to chloride levels being above 1,000 mg/kg in specific samples, AEA conducted an additional sampling event to determine the depth at which contamination was present.

### 4.1.3 Additional Post Excavation Soil Sampling

On February 26, 2015 AEA personnel took ten (10) additional soil samples at multiple depths to determine the vertical extent of the contamination depressed culvert. Samples were taken using a hand auger to reach 1.5 and 2.0 feet bgs. Samples were collected using decontaminated scoops,

placed in lab provided 4oz jars, labeled and placed on ice. Samples were shipped to Hall Environmental Analytical Laboratory (HEAL) and analyzed for EPA 300.0 Chlorides.

Results from the soil sampling show that contamination did not move much below the surface. All laboratory data sheets are located in Appendix B. Table 3 displays the lab results

Sample ID	Sample Depth (ft.)	Constituent	Detection (mg/kg)
SS01	1	Chloride	240
SS01	2	Chloride	80
SS09	1	Chloride	46
SS09	2	Chloride	150
SS02	1	Chloride	530
SS10*	1	Chloride	390
SS03	1	Chloride	540
SS03	2	Chloride	23
SS04	1	Chloride	350
SS04	2	Chloride	3.1

Table 3

\*note: SB10 is located approximately 10 feet east of SS02

## **5** Recommendations

Due to the small amount of chloride contamination still remaining on the site, AEA proposes additional excavation to address contaminated soils.

AEA recommends excavating to 0.5 feet below known contamination surrounding SS01, SS03, and SS04 where chloride levels are still above 1000 mg/kg. Contaminated soils would be placed in a belly dump trucks and hauled to a permitted disposal facility. AEA recommends taking three (3) confirming soil samples post excavation to be analyzed for EPA 300.0 Chloride to confirm all contaminated soils have been removed. Once confirmation lab samples have been verified clean, AEA recommends back filling the excavated area with clean fill dirt, re-grading the excavated area and revegetating the portion of the affected area previously having vegetation. See Figure 3 Vegetation Map for area needing vegetation.

**Appendix A: Figures** 



Figure 1: Site Vicinity Map

Corrective Action Plan Atkins Engineering Associates, Inc. August 2015





## **Appendix B: Laboratory Analytical Datasheets**



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

January 14, 2015

Christopher Cortez Atkins Engineering Associates 2904 West Second Street Roswell, NM 88201 TEL: (575) 624-2420 FAX (575) 624-2421

RE: MRWS

OrderNo.: 1501145

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/7/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** Lab Order 1501145 Date Reported: 1/14/2015

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### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates **Project:** MRWS

1501145-001

Lab ID:

Client Sample ID: Composite #1 Collection Date: 1/6/2015 12:25:00 PM Received Date: 1/7/2015 9:50:00 AM

Analyses	Result	RL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E					Analyst	: JME
Diesel Range Organics (DRO)	3700	1000		mg/L	1E	1/14/2015 9:28:20 AM	17106
Surr: DNOP	0	76.5-150	S	%REC	1E	1/14/2015 9:28:20 AM	17106
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	57	2.5		mg/L	50	1/9/2015 11:52:36 AM	R2357
Surr: BFB	138	80-120	S	%REC	50	1/9/2015 11:52:36 AM	R2357
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	4100	50		µg/L	50	1/9/2015 11:52:36 AM	R2357
Toluene	4700	50		µg/L	50	1/9/2015 11:52:36 AM	R2357
Ethylbenzene	650	50		µg/L	50	1/9/2015 11:52:36 AM	R2357
Xylenes, Total	3000	100		µg/L	50	1/9/2015 11:52:36 AM	R2357
Surr: 4-Bromofluorobenzene	97.5	66.6-167		%REC	50	1/9/2015 11:52:36 AM	R2357
EPA METHOD 300.0: ANIONS						Analyst	: Igp
Chloride	40000	2500	*	mg/L	5E	1/12/2015 5:00:53 PM	R2360
EPA METHOD 7470: MERCURY						Analyst	: MMD
Mercury	ND	0.00020		mg/L	1	1/12/2015 5:47:21 PM	17179
EPA 6010B: TOTAL RECOVERABLE	METALS					Analyst	ELS
Arsenic	ND	0.10		mg/L	5	1/11/2015 3:49:57 PM	17151
Barium	3.4	0.10		mg/L	5	1/11/2015 3:49:57 PM	17151
Cadmium	ND	0.010		mg/L	5	1/11/2015 3:49:57 PM	17151
Chromium	0.094	0.030		mg/L	5	1/11/2015 3:49:57 PM	17151
Lead	ND	0.025		mg/L	5	1/11/2015 3:49:57 PM	17151
Selenium	ND	0.25		mg/L	5	1/11/2015 3:49:57 PM	17151
Silver	ND	0.025		mg/L	5	1/11/2015 3:49:57 PM	17151

Matrix: AQUEOUS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysi	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 o
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	I age I (
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

**Analytical Report** Lab Order 1501145 Date Reported: 1/14/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

**Project:** MRWS

**Client Sample ID:** Composite #2 Collection Date: 1/6/2015 12:10:00 PM

Lab ID: 1501145-002	Matrix:	SOIL	<b>Received Date:</b> 1/7/2015 9:50:00 AM			/2015 9:50:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	<b>BE ORGANICS</b>					Analyst	: JME
Diesel Range Organics (DRO)	19000	9900		mg/Kg	1E	1/14/2015 9:58:55 AM	17105
Surr: DNOP	0	63.5-128	S	%REC	1E	1/14/2015 9:58:55 AM	17105
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	1900	240		mg/Kg	50	1/8/2015 12:19:05 PM	17107
Surr: BFB	170	80-120	S	%REC	50	1/8/2015 12:19:05 PM	17107
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	19	2.4		mg/Kg	50	1/8/2015 12:19:05 PM	17107
Toluene	51	2.4		mg/Kg	50	1/8/2015 12:19:05 PM	17107
Ethylbenzene	15	2.4		mg/Kg	50	1/8/2015 12:19:05 PM	17107
Xylenes, Total	65	4.8		mg/Kg	50	1/8/2015 12:19:05 PM	17107
Surr: 4-Bromofluorobenzene	118	80-120		%REC	50	1/8/2015 12:19:05 PM	17107
EPA METHOD 300.0: ANIONS						Analyst	: Igp
Chloride	27000	1500		mg/Kg	1E	1/13/2015 12:49:10 PM	17200

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	RSD is greater than RSDlimit
	R	RPD outside accepted recovery limits
	S	Spike Recovery outside accepted recovery limits

- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 2 of 12
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

Client: Project:	Atkins Engineering Associates MRWS											
Sample ID	MB-17200	BLK	TestCode: EPA Method 300.0: Anions									
Client ID:	PBS         Batch ID: 17200         RunNo: 23626											
Prep Date:	e: 1/13/2015 Analysis Date: 1/13/2015				SeqNo: 697573 Units: m			Units: mg/K	J/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		ND	1.5									
Sample ID	LCS-17200	SampTy	/pe: <b>LC</b>	s	Tes	tCode: EP	A Method	300.0: Anion	s			
Client ID:	LCSS	Batch	ID: 17	200	F	RunNo: 23	626					
Prep Date:	1/13/2015	Analysis Da	ate: 1/	13/2015	S	SeqNo: 69	7574	Units: mg/K	g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride		14	1.5	15.00	0	95.8	90	110				

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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WO#: 1501145 14-Jan-15

Client: Project:	Atkins Engineerin MRWS	ng Associates						
Sample ID MB	Sam	pType: <b>MBLK</b>	Tes	tCode: EPA Method	300.0: Anions			
Client ID: PB	<b>N</b> Ba	tch ID: R23606	I	RunNo: <b>23606</b>				
Prep Date:	Analysis	Date: 1/12/20	15	SeqNo: <b>697173</b>	Units: mg/L			
Analyte	Result	PQL SPK	value SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50						
Sample ID LC	S Sam	pType: <b>LCS</b>	Tes	tCode: EPA Method	300.0: Anions	;		
Client ID: LC	SW Ba	tch ID: R23606	I	RunNo: <b>23606</b>				
Prep Date:	Analysis	Date: 1/12/20	15	SeqNo: <b>697174</b>	Units: mg/L			
Analyte	Result	PQL SPK	value SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000 0	92.9 90	110			

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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WO#: 1501145 14-Jan-15 3.7

5.000

A .1 :

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Client:	Atkins E	ngineering Ass	sociates							
Project:	MRWS									
Sample ID	MB-17105	SampType	MBLK	Tes	tCode: EP	PA Method	8015D: Diese	el Range C	Organics	
Client ID:	PBS	Batch ID:	17105	F	RunNo: 23	536				
Prep Date:	1/7/2015	Analysis Date:	1/8/2015	5	SeqNo: 69	5364	Units: mg/K	g		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range ( Surr: DNOP	Organics (DRO)	ND 9.5	10 10.00		94.5	63.5	128			
Sample ID	LCS-17105	SampType	LCS	Tes	tCode: EP	A Method	8015D: Diese	el Range C	Organics	
Client ID:	LCSS	Batch ID:	17105	F	RunNo: 23	536				
Prep Date:	1/7/2015	Analysis Date:	1/8/2015	5	SeqNo: 69	5365	Units: mg/K	g		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	63	10 50.00	0	125	67.8	130			
Surr: DNOP		4.7	5.000		94.4	63.5	128			
Sample ID	LCS-17189	SampType	LCS	Tes	tCode: EP	A Method	8015D: Diese	l Range C	Organics	
Client ID:	LCSS	Batch ID:	17189	F	RunNo: 23	634				
Prep Date:	1/13/2015	Analysis Date:	1/14/2015	5	SeqNo: 69	7805	Units: %RE	C		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

74.1

63.5

128

#### **Qualifiers:**

Surr: DNOP

- Value exceeds Maximum Contaminant Level. \*
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH greater than 2.
  - Reporting Detection Limit RL

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14-Jan-15

Atkins Engineering Associates

		14-Jan-15

WO#:

Project: MRWS										
Sample ID LCS-17106	SampT	ype: LC	S	Tes						
Client ID: LCSW	Batch	n ID: <b>17</b>	106	R	RunNo: <b>2</b> 3	3562				
Prep Date: 1/7/2015	Analysis D	ate: 1/	9/2015	S	SeqNo: 6	96099	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.6	69.7	142			
Surr: DNOP	0.59		0.5000		117	76.5	150			
Sample ID MB-17106	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Diese	l Range		
Sample ID MB-17106 Client ID: PBW	•	<sup>-</sup> ype: <b>ME</b> n ID: <b>17</b>			tCode: El		8015D: Diese	l Range		
•	•	n ID: <b>17</b>	106	R		3580	8015D: Diese Units: mg/L	l Range		
Client ID: PBW	Batch	n ID: <b>17</b>	106 12/2015	R	RunNo: <b>2</b> :	3580		I Range %RPD	RPDLimit	Qual
Client ID: <b>PBW</b> Prep Date: <b>1/7/2015</b>	Batch Analysis D	n ID: <b>17</b> <sup>.</sup> Date: <b>1/</b>	106 12/2015	R S	RunNo: <b>2</b> : SeqNo: <b>6</b> :	3580 97268	Units: <b>mg/L</b>	U	RPDLimit	Qual
Client ID: <b>PBW</b> Prep Date: <b>1/7/2015</b> Analyte	Batch Analysis D Result	Di ID: 17 Date: 1/ PQL	106 12/2015	R S	RunNo: <b>2</b> : SeqNo: <b>6</b> :	3580 97268	Units: <b>mg/L</b>	U	RPDLimit	Qual

#### **Qualifiers:**

**Client:** 

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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1501145 *14-Jan-15* 

Client: Project:	Atkins Eı MRWS	ngineering	Associa	ates							
Sample ID MB	-17107	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PB	S	Batch	n ID: <b>17</b>	107	F	RunNo: <b>2</b>	3541				
Prep Date: 1/	7/2015	Analysis D	ate: 1/	8/2015	5	SeqNo: 6	95642	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Org Surr: BFB	ganics (GRO)	ND 920	5.0	1000		92.4	80	120			
Sample ID LCS	S-17107	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCS	SS	Batch	n ID: 17	107	F	RunNo: <b>2</b> :	3541				
Prep Date: 1/	7/2015	Analysis D	ate: 1/	8/2015	S	SeqNo: 6	95643	Units: <b>mg/k</b>	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Org Surr: BFB	ganics (GRO)	21 1000	5.0	25.00 1000	0	82.1 101	65.8 80	139 120			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

1501145

WO#:

Client: Atkins I Project: MRWS	Engineering	Associa	ates							
Sample ID 5ML RB	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBW	Batc	h ID: <b>R2</b>	3573	F	RunNo: 2	3573				
Prep Date:	Analysis [	Date: 1/	9/2015	S	SeqNo: 6	96294	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 16	0.050	20.00		82.4	80	120			
SUIT: BFB	10		20.00		02.4	80	120			
Sample ID 2.5UG GRO LCS	Samp <sup>®</sup>	Гуре: <b>LC</b>	S	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSW	Batc	h ID: <b>R2</b>	3573	F	RunNo: <b>2</b>	3573				
Prep Date:	Analysis [	Date: 1/	9/2015	5	SeqNo: 6	96295	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	90.2	80	120			
Surr: BFB	19		20.00		93.6	80	120			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH greater than 2.
  - Reporting Detection Limit RL

14-Jan-15

1501145

WO#:

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## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Client:	Atkins Eı	ngineering	Associa	ates							
Project:	MRWS										
Sample ID MB-1	7107	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS		Batch	n ID: <b>17</b>	107	F	RunNo: 2	3541				
Prep Date: 1/7/	2015	Analysis D	Date: 1/	8/2015	S	SeqNo: 6	95657	Units: <b>mg/k</b>	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.050								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Kylenes, Total		ND	0.10								
Surr: 4-Bromofluoro	benzene	1.2		1.000		116	80	120			
Sample ID LCS-	17107	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCS	S	Batch	n ID: <b>17</b>	107	F	RunNo: 2	3541				
Prep Date: 1/7/	2015	Analysis D	Date: 1/	8/2015	S	SeqNo: 6	95658	Units: <b>mg/k</b>	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.91	0.050	1.000	0	91.2	80	120			
Foluene		0.93	0.050	1.000	0	93.1	80	120			
Ethylbenzene		0.98	0.050	1.000	0	97.6	80	120			
Kylenes, Total		3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluoro	benzene	1.3		1.000		126	80	120			S

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH greater than 2.
  - Reporting Detection Limit RL

1501145 14-Jan-15

WO#:

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## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Client: Atkin Project: MRW	s Engineering 'S	Associa	ates							
Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBW	Batch	n ID: <b>R2</b>	3573	F	RunNo: 2	3573				
Prep Date:	Analysis D	ate: 1/	9/2015	S	SeqNo: 6	96301	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		99.6	66.6	167			
Sample ID 100NG BTEX	L <b>CS</b> SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		

Sample ID 100NG BTEX LCS	SampT	ype: LC	S	Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSW	Batch	n ID: R2	3573	R	RunNo: 2	3573				
Prep Date:	Analysis D	ate: 1/	9/2015	S	SeqNo: 6	96302	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	22	1.0	20.00	0	108	80	120			
Ethylbenzene	22	1.0	20.00	0	109	80	120			
Xylenes, Total	66	2.0	60.00	0	110	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		113	66.6	167			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - Р Sample pH greater than 2.
  - Reporting Detection Limit RL

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Client: Project:	Atkins E MRWS	ngineering Asso	ciates							
Sample ID		SampType: I		Tee	tCode: ED	A Method	7470: Mercur			
Client ID:	PBW	Batch ID:			RunNo: 236		7470. Mercu	y		
Prep Date:	1/12/2015	Analysis Date:	1/12/2015	S	SeqNo: 697	7007	Units: mg/L			
Analyte		Result PQI	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.0002	:0							
Sample ID	LCS-17179	SampType: I	LCS	Tes	tCode: EP/	A Method	7470: Mercur	у		
Client ID:	LCSW	Batch ID:	17179	F	RunNo: 236	600				
Prep Date:	1/12/2015	Analysis Date:	1/12/2015	S	SeqNo: 697	7008	Units: mg/L			
Analyte		Result PQI	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0054 0.0002	0.005000	0	107	80	120			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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WO#: 1501145 14-Jan-15

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

WO#:	1501145

14-J	an-1	5
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Client: Project:	Atkins E MRWS	ngineering	g Associa	ates							
Sample ID	MB-17151	Samp	Туре: МЕ	BLK	Test	tCode: El	PA 6010B: 1	Total Recove	rable Meta	als	
Client ID:	PBW	Bato	h ID: 17	151	R	unNo: 2	3570				
Prep Date:	1/9/2015	Analysis	Date: 1/	11/2015	S	eqNo: 6	96153	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.020								
Barium		ND	0.020								
Cadmium		ND	0.0020								
Chromium		ND	0.0060								
			0.0050								
Lead		ND	0.0050								
Lead Selenium		ND ND	0.0050								
Selenium Silver	LCS-17151	ND ND	0.050		Test	Code: El	PA 6010B: 1	Fotal Recove	rable Meta	als	
Selenium Silver Sample ID		ND ND Samp	0.050 0.0050			Code: Ef		Fotal Recove	rable Meta	als	
Selenium Silver Sample ID	LCSW	ND ND Samp	0.050 0.0050 Type: LC ch ID: 17	151	R		3570	Total Recove		als	
Selenium Silver Sample ID Client ID:	LCSW	ND ND Samp Bato	0.050 0.0050 Type: LC ch ID: 17	151 11/2015	R	unNo: <b>2</b> :	3570			als RPDLimit	Qual
Selenium Silver Sample ID Client ID: Prep Date: Analyte	LCSW	ND ND Samp Bato Analysis	0.050 0.0050 Type: LC ch ID: 17 Date: 1/	151 11/2015	R	tunNo: <b>2</b> GeqNo: <b>6</b>	3570 96154	Units: mg/L			Qual
Selenium Silver Sample ID Client ID: Prep Date:	LCSW	ND ND Samp Bato Analysis Result	0.050 0.0050 Type: LC ch ID: 17 Date: 1/ PQL	151 11/2015 SPK value	R S SPK Ref Val	2000 2000 2000 2000 2000 2000 2000 200	3570 96154 LowLimit	Units: <b>mg/L</b> HighLimit			Qual
Selenium Silver Sample ID Client ID: Prep Date: Analyte Arsenic	LCSW	ND ND Samp Bato Analysis Result 0.52	0.050 0.0050 Type: LC th ID: 17 Date: 1/ PQL 0.020	151 11/2015 SPK value 0.5000	R S SPK Ref Val 0	2000 2000 2000 2000 2000 2000 2000 200	3570 96154 LowLimit 80	Units: <b>mg/L</b> HighLimit 120			Qual
Selenium Silver Sample ID Client ID: Prep Date: Analyte Arsenic Barium	LCSW	ND ND Samp Bato Analysis Result 0.52 0.48	0.050 0.0050 Type: LC ch ID: 17 Date: 1/ PQL 0.020 0.020	151 11/2015 SPK value 0.5000 0.5000	R S SPK Ref Val 0 0	tunNo: 23 GeqNo: 69 <u>%REC</u> 103 95.6	<b>3570</b> <b>96154</b> LowLimit 80 80	Units: <b>mg/L</b> HighLimit 120 120			Qual
Selenium Silver Sample ID Client ID: Prep Date: Analyte Arsenic Barium Cadmium	LCSW	ND ND Samp Bato Analysis Result 0.52 0.48 0.48	0.050 0.0050 Type: LC ch ID: 17 Date: 1/ PQL 0.020 0.020 0.0020	151 11/2015 SPK value 0.5000 0.5000 0.5000	R S SPK Ref Val 0 0 0	eunNo: 23 aeqNo: 69 <u>%REC</u> 103 95.6 95.4	3570 96154 LowLimit 80 80 80	Units: <b>mg/L</b> HighLimit 120 120 120			Qual
Selenium Silver Sample ID Client ID: Prep Date: Analyte Arsenic Barium Cadmium Chromium	LCSW	ND ND Samp Bato Analysis Result 0.52 0.48 0.48 0.48 0.47	0.050 0.0050 Type: LC ch ID: 17 Date: 1/ PQL 0.020 0.0020 0.0020 0.0060	151 11/2015 SPK value 0.5000 0.5000 0.5000 0.5000	R SPK Ref Val 0 0 0 0	eunNo: 23 REC %REC 103 95.6 95.4 94.4	<b>3570</b> <b>96154</b> LowLimit 80 80 80 80	Units: <b>mg/L</b> HighLimit 120 120 120 120			Qual

#### **Qualifiers:**

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- Е Value above quantitation range
- J Analyte detected below quantitation limits
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- ND Not Detected at the Reporting Limit
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  - Reporting Detection Limit RL

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	HALL
	ENVIRONMENTAL
	ANALYSIS
-	LABORATORY

#### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: ATK	Work Order Number:	1501145		Rcpti	No: 1
Received by/date:	01/07/15				
Logged By: Lindsay Mangin	1/7/2015 9:50:00 AM		Finalis/Hea	9D	
Completed By: Lindsay Mangin	1/7/2015 10:01:01 AM		-timby Hler	ø.	
Reviewed By:	01/07/15		$\mathcal{O} \circ \mathcal{O}$	, ,	
Chain of Custody					I
1. Custody seals intact on sample bottles?		Yes 🗌	] No [_	Not Present	✓
2. Is Chain of Custody complete?		Yes 🗹	] No 🗌	Not Present	
3. How was the sample delivered?		UPS			
<u>Log In</u>					
4. Was an attempt made to cool the samples	\$?	Yes 🗹	No [	NA NA	
			N. [		7
5. Were all samples received at a temperatur	re of >0° C to 6.0°C	Yes 🗹	No		
6. Sample(s) in proper container(s)?		Yes 🔽	No 🗌		
7. Sufficient sample volume for indicated test	:(s)?	Yes 🗹	] No [	]	
8. Are samples (except VOA and ONG) prope	erly preserved?	Yes 🗹	No 🗌	]	
9. Was preservative added to bottles?		Yes 🗌	] No 🗹	MA NA	
10.VOA vials have zero headspace?		Yes 🗹	-	No VOA Vials	
11. Were any sample containers received brol	ken?	Yes 🗆	No No	# of preserved	
12.Does paperwork match bottle labels?	~	Yes 🔽	) No 🗌	bottles checked	<u>_</u>
(Note discrepancies on chain of custody)					(<2) pr >12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🔽	) No 🗌	Adjusted	? <u>No</u>
14. Is it clear what analyses were requested?		Yes 🗹	] No 🗌		40
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🔽	] No [	Checked	by:
Special Handling (if applicable)					
16 Was client notified of all discrepancies with	h this order?	Yes 🗌	] <b>No</b> [		

16. Was client notified of all dis	crepancies with this order?	Yes	No	١	
Person Notified:		Date:			
By Whom:		Via: eMail	] Phone 🗌 Fax	in Person	
Regarding:					
Client Instructions:					

17. Additional remarks:

#### 18. Cooler Information

	Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
[	1	2.1	Good	Yes			

HALL ENVIRONMENTAL         HALL ENVIRONMENTAL         ANALYSIS LABORATORY         www.hallenvironmental.com         4901 Hawkins NE - Albuquerque, NM 87109         Tel. 505-345-3975        Fax 505-345-4107         Analysis Request	JIEX, MTBE + TMB's (8021)       BTEX, MTBE + TMB's (8021)       BTEX + MTBE + TPH (Gas only)       PH Method 8015B (Gas/Diesel)       PH (Method 504.1)       DB (Method 504.1)       B310 (PUA or PAH)       Anions (F, ONO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )       Anions (F, ONO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )       B260B (VOA)       B270 (Semi-VOA)       B270 (Semi-VOA)		Time: Relinquished by: 17-20 17-20 Time: Relinquished by: Received b
Turn-Around Time:		1 350 multiple HNO3 - COU 1 500 multiple HNO3 - COU 3 thruss Har would - COU 3 thruss Har would - COU 1 thruss - COU 1 th	Received by: Date Time
Heins Simmerering Associates IN. Idress: 2904 N 3ND St	Sampling a) a Harren com	AQ Composite #1 c( (C Sell Composite #2 Sell Composite #2	Time: Relinquished by:
Client: A Mailing Ac	email or Fax#: QA/QC Package: DAstandard Accreditation DELAP Date Time	16/15 12:25 cr cr r/ cr	Date: T



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

January 29, 2015

Christopher Cortez Atkins Engineering Associates 2904 West Second Street Roswell, NM 88201 TEL: (575) 624-2420 FAX (575) 624-2421

RE: MRWS

OrderNo.: 1501644

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 8 sample(s) on 1/20/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 1/29/2015

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

**Project:** MRWS

Client Sample ID: SS01 Collection Date: 1/16/2015 2:50:00 PM

Lab ID: 1501644-001	Matrix:	SOIL	Received I	Received Date: 1/20/2015 1:25:00 PM				
Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	WL		
Diesel Range Organics (DRO)	27	10	mg/Kg	1	1/22/2015 2:13:21 PM	17319		
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/22/2015 2:13:21 PM	17319		
Surr: DNOP	81.8	63.5-128	%REC	1	1/22/2015 2:13:21 PM	17319		
EPA METHOD 8015D: GASOLINE RANG	θE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/21/2015 2:05:59 PM	17313		
Surr: BFB	93.2	80-120	%REC	1	1/21/2015 2:05:59 PM	17313		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.048	mg/Kg	1	1/21/2015 2:05:59 PM	17313		
Toluene	ND	0.048	mg/Kg	1	1/21/2015 2:05:59 PM	17313		
Ethylbenzene	ND	0.048	mg/Kg	1	1/21/2015 2:05:59 PM	17313		
Xylenes, Total	ND	0.097	mg/Kg	1	1/21/2015 2:05:59 PM	17313		
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	1/21/2015 2:05:59 PM	17313		
EPA METHOD 300.0: ANIONS					Analyst	: Igp		
Chloride	1800	75	mg/Kg	50	1/27/2015 12:56:47 AM	17363		

Refer to the QC	Summary	report and s	sample logi	n checklist lo	or nagged (	2C data and	preservation	information

Qualifiers:	*	Value exceeds Maximum Contaminant Level.

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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 Page 1 of 12
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 1/29/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

Client Sample ID: SS02 Collection Date: 1/16/2015 2:52:00 PM

Project: MRWS			Collection I	Date: 1/1	6/2015 2:52:00 PM				
Lab ID: 1501644-002	Matrix:	Received I	Received Date: 1/20/2015 1:25:00 PM						
Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANGE C	RGANICS				Analyst	BCN			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/22/2015 2:09:05 PM	17319			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2015 2:09:05 PM	17319			
Surr: DNOP	81.0	63.5-128	%REC	1	1/22/2015 2:09:05 PM	17319			
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/21/2015 3:32:04 PM	17313			
Surr: BFB	90.8	80-120	%REC	1	1/21/2015 3:32:04 PM	17313			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.047	mg/Kg	1	1/21/2015 3:32:04 PM	17313			
Toluene	ND	0.047	mg/Kg	1	1/21/2015 3:32:04 PM	17313			
Ethylbenzene	ND	0.047	mg/Kg	1	1/21/2015 3:32:04 PM	17313			
Xylenes, Total	ND	0.094	mg/Kg	1	1/21/2015 3:32:04 PM	17313			
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	1/21/2015 3:32:04 PM	17313			
EPA METHOD 300.0: ANIONS					Analyst	: Igp			
Chloride	170	7.5	mg/Kg	5	1/22/2015 2:40:43 PM	17363			

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Qualifiers: *		Value exceeds Maximum Contaminant Level.
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- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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 Page 2 of 12
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 1/29/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

**Client Sample ID: SS03** Collection Date: 1/16/2015 2:54:00 PM

Project: MRWS			Collection I	Date: 1/1	6/2015 2:54:00 PM				
Lab ID: 1501644-003	Matrix:	SOIL	Received 1	Received Date: 1/20/2015 1:25:00 PM					
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN			
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	1/22/2015 2:30:45 PM	17319			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2015 2:30:45 PM	17319			
Surr: DNOP	84.5	63.5-128	%REC	1	1/22/2015 2:30:45 PM	17319			
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/21/2015 4:00:54 PM	17313			
Surr: BFB	90.8	80-120	%REC	1	1/21/2015 4:00:54 PM	17313			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.049	mg/Kg	1	1/21/2015 4:00:54 PM	17313			
Toluene	ND	0.049	mg/Kg	1	1/21/2015 4:00:54 PM	17313			
Ethylbenzene	ND	0.049	mg/Kg	1	1/21/2015 4:00:54 PM	17313			
Xylenes, Total	ND	0.098	mg/Kg	1	1/21/2015 4:00:54 PM	17313			
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	1/21/2015 4:00:54 PM	17313			
EPA METHOD 300.0: ANIONS					Analyst	: Igp			
Chloride	1100	30	mg/Kg	20	1/22/2015 3:17:56 PM	17363			

			_		
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated	d Meth

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 3 of 12
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

**Analytical Report** Lab Order 1501644 Date Reported: 1/29/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

**Client Sample ID: SS04** Collection Date: 1/16/2015 2:56:00 PM

Project: MRWS			Collection I	Date: 1/1	6/2015 2:56:00 PM					
<b>Lab ID:</b> 1501644-004	Matrix:	SOIL	Received I	<b>Received Date:</b> 1/20/2015 1:25:00 PM						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	1/22/2015 2:52:15 PM	17319				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/22/2015 2:52:15 PM	17319				
Surr: DNOP	86.9	63.5-128	%REC	1	1/22/2015 2:52:15 PM	17319				
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/21/2015 4:29:37 PM	17313				
Surr: BFB	89.7	80-120	%REC	1	1/21/2015 4:29:37 PM	17313				
EPA METHOD 8021B: VOLATILES					Analyst	: NSB				
Benzene	ND	0.049	mg/Kg	1	1/21/2015 4:29:37 PM	17313				
Toluene	ND	0.049	mg/Kg	1	1/21/2015 4:29:37 PM	17313				
Ethylbenzene	ND	0.049	mg/Kg	1	1/21/2015 4:29:37 PM	17313				
Xylenes, Total	ND	0.097	mg/Kg	1	1/21/2015 4:29:37 PM	17313				
Surr: 4-Bromofluorobenzene	99.2	80-120	%REC	1	1/21/2015 4:29:37 PM	17313				
EPA METHOD 300.0: ANIONS					Analyst	: Igp				
Chloride	2600	75	mg/Kg	50	1/27/2015 1:09:12 AM	17363				

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	RSD is greater than RSDlimit
	R	RPD outside accepted recovery limits
	S	Spike Recovery outside accepted recovery limits

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit Page 4 of 12
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

Date Reported: 1/29/2015 **Client Sample ID: SS05** 

Project: MRWS			Collection I	Date: 1/1	6/2015 2:58:00 PM				
Lab ID: 1501644-005	Matrix:	SOIL	Received I	Date: 1/20/2015 1:25:00 PM					
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANGE	E ORGANICS				Analyst	BCN			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/22/2015 3:13:48 PM	17319			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2015 3:13:48 PM	17319			
Surr: DNOP	83.8	63.5-128	%REC	1	1/22/2015 3:13:48 PM	17319			
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	1/21/2015 9:16:45 PM	17313			
Surr: BFB	86.1	80-120	%REC	1	1/21/2015 9:16:45 PM	17313			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.046	mg/Kg	1	1/21/2015 9:16:45 PM	17313			
Toluene	ND	0.046	mg/Kg	1	1/21/2015 9:16:45 PM	17313			
Ethylbenzene	ND	0.046	mg/Kg	1	1/21/2015 9:16:45 PM	17313			
Xylenes, Total	ND	0.093	mg/Kg	1	1/21/2015 9:16:45 PM	17313			
Surr: 4-Bromofluorobenzene	93.5	80-120	%REC	1	1/21/2015 9:16:45 PM	17313			
EPA METHOD 300.0: ANIONS					Analyst	: Igp			
Chloride	290	30	mg/Kg	20	1/22/2015 4:32:24 PM	17363			

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B A	Analyte detected in the associated Method 1

- \* Value exceeds Maximum Contaminant Level.
  - Е Value above quantitation range
  - J Analyte detected below quantitation limits
  - 0 RSD is greater than RSDlimit
  - RPD outside accepted recovery limits R
  - S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit Page 5 of 12
- Р Sample pH greater than 2.
- Reporting Detection Limit RL

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

Date Reported: 1/29/2015
Client Sample ID: SS06

Project: MRWS			Collection I	Date: 1/1	6/2015 3:00:00 PM	
Lab ID: 1501644-006	Matrix:	SOIL	Received I	Date: 1/2	0/2015 1:25:00 PM	
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	1/22/2015 3:34:59 PM	17319
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/22/2015 3:34:59 PM	17319
Surr: DNOP	78.4	63.5-128	%REC	1	1/22/2015 3:34:59 PM	17319
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/21/2015 9:45:29 PM	17313
Surr: BFB	86.4	80-120	%REC	1	1/21/2015 9:45:29 PM	17313
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.049	mg/Kg	1	1/21/2015 9:45:29 PM	17313
Toluene	ND	0.049	mg/Kg	1	1/21/2015 9:45:29 PM	17313
Ethylbenzene	ND	0.049	mg/Kg	1	1/21/2015 9:45:29 PM	17313
Xylenes, Total	ND	0.099	mg/Kg	1	1/21/2015 9:45:29 PM	17313
Surr: 4-Bromofluorobenzene	94.5	80-120	%REC	1	1/21/2015 9:45:29 PM	17313
EPA METHOD 300.0: ANIONS					Analyst	: Igp
Chloride	81	30	mg/Kg	20	1/22/2015 4:57:13 PM	17363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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*	Value exceeds Maximum Contaminant Level.
	value exceeds Maximum Containmant Eevel.

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit

**Qualifiers:** 

- R RPD outside accepted recovery 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 Page 6 of 12
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Date Reported: 1/29/2015

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

Client Sample ID: SS07 Collection Date: 1/16/2015 3:02:00 PM

	6/2015 3:02:00 PM	Date: 1/1	Collection I			ject: MRWS	Project:		
	0/2015 1:25:00 PM	Date: 1/2	Received I	SOIL	Matrix:	<b>ID:</b> 1501644-007	Lab ID: 1501644-007		
Batch	Date Analyzed	DF	al Units	RL Qu	Result	Analyses			
t: BCN	Analyst:				E ORGANICS	A METHOD 8015D: DIESEL RANG	EPA MET		
17319	1/22/2015 3:56:22 PM	1	mg/Kg	10	ND	iesel Range Organics (DRO)	Diesel R		
17319	1/22/2015 3:56:22 PM	1	mg/Kg	50	ND	lotor Oil Range Organics (MRO)	Motor Oi		
17319	1/22/2015 3:56:22 PM	1	%REC	63.5-128	89.4	Surr: DNOP	Surr: [		
t: NSB	Analyst:				NGE	A METHOD 8015D: GASOLINE RA	EPA MET		
/ 17313	1/21/2015 10:14:08 PM	1	mg/Kg	4.9	ND	asoline Range Organics (GRO)	Gasoline		
1 17313	1/21/2015 10:14:08 PM	1	%REC	80-120	85.7	Surr: BFB	Surr: E		
t: NSB	Analyst:					A METHOD 8021B: VOLATILES	EPA MET		
/ 17313	1/21/2015 10:14:08 PM	1	mg/Kg	0.049	ND	enzene	Benzene		
/ 17313	1/21/2015 10:14:08 PM	1	mg/Kg	0.049	ND	oluene	Toluene		
/ 17313	1/21/2015 10:14:08 PM	1	mg/Kg	0.049	ND	thylbenzene	Ethylben		
/ 17313	1/21/2015 10:14:08 PM	1	mg/Kg	0.099	ND	ylenes, Total	Xylenes,		
/ 17313	1/21/2015 10:14:08 PM	1	%REC	80-120	93.1	Surr: 4-Bromofluorobenzene	Surr: 4		
t: Igp	Analyst:					A METHOD 300.0: ANIONS	EPA MET		
17363	1/22/2015 5:22:02 PM	20	mg/Kg	30	350	hloride	Chloride		
/ / / / /	1/22/2015 3:56:22 PM Analyst: 1/21/2015 10:14:08 PM 1/21/2015 10:14:08 PM Analyst: 1/21/2015 10:14:08 PM 1/21/2015 10:14:08 PM 1/21/2015 10:14:08 PM 1/21/2015 10:14:08 PM 1/21/2015 10:14:08 PM Analyst:	1 1 1 1 1 1 1 1	%REC mg/Kg %REC mg/Kg mg/Kg mg/Kg %REC	63.5-128 4.9 80-120 0.049 0.049 0.049 0.099 80-120	89.4 NGE ND 85.7 ND ND ND ND 93.1	Surr: DNOP A METHOD 8015D: GASOLINE RA asoline Range Organics (GRO) Surr: BFB A METHOD 8021B: VOLATILES enzene oluene thylbenzene ylenes, Total Surr: 4-Bromofluorobenzene A METHOD 300.0: ANIONS	Surr: I EPA MET Gasoline Surr: I EPA MET Toluene Ethylben Xylenes, Surr: 4		

	Kelei		Summar	y report and	sample i	ogin en	CCKIIST IO	naggeu	ųι	uata anu	preser	varion	morman
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Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Б	Value above quantitation range

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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 Page 7 of 12
- P Sample pH greater than 2.
- RL Reporting Detection Limit

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Atkins Engineering Associates

Date Reported: 1/29/2015 Client Sample ID: SS08

Project: MRWS	<b>Collection Date:</b> 1/16/2015 3:04:00 PM							
Lab ID: 1501644-008	Matrix:	<b>Received Date:</b> 1/20/2015 1:25:00 PM						
Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: WL		
Diesel Range Organics (DRO)	39	10	mg/Kg	1	1/22/2015 2:43:56 PM	17319		
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/22/2015 2:43:56 PM	17319		
Surr: DNOP	74.0	63.5-128	%REC	1	1/22/2015 2:43:56 PM	17319		
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/21/2015 10:42:50 PM	1 17313		
Surr: BFB	86.1	80-120	%REC	1	1/21/2015 10:42:50 PM	1 17313		
EPA METHOD 8021B: VOLATILES					Analys	t: NSB		
Benzene	ND	0.048	mg/Kg	1	1/21/2015 10:42:50 PM	1 17313		
Toluene	ND	0.048	mg/Kg	1	1/21/2015 10:42:50 PM	1 17313		
Ethylbenzene	ND	0.048	mg/Kg	1	1/21/2015 10:42:50 PM	1 17313		
Xylenes, Total	ND	0.097	mg/Kg	1	1/21/2015 10:42:50 PM	1 17313		
Surr: 4-Bromofluorobenzene	94.5	80-120	%REC	1	1/21/2015 10:42:50 PM	1 17313		
EPA METHOD 300.0: ANIONS					Analys	t: Igp		
Chloride	450	30	mg/Kg	20	1/22/2015 5:46:51 PM	17363		

		•	<b>J</b> 1	1 0			1	
Qualifiers:	*	Value exc	ceeds Maximum Co	ontaminant Level.	В	Analyte de	etected in the associat	ed Metho

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit Page 8 of 12
- Р Sample pH greater than 2.
- Reporting Detection Limit RL
| Client:<br>Project:             | Atkins Er<br>MRWS | ngineering          | Associ            | ates               |                  |  |                |                    |      |          |      |
|---------------------------------|-------------------|---------------------|-------------------|--------------------|------------------|--|----------------|--------------------|------|----------|------|
| Sample ID MB                    |                   | SampT               |                   |                    |                  |  |                | 300.0: Anion       | s    |          |      |
|                                 | 5<br>22/2015      | Analysis D          |                   | /22/2015           | S                | RunNo: 2:<br>SeqNo: 70                 | 03479          | Units: <b>mg/K</b> | 0    |          |      |
| Analyte<br>Chloride             |                   | Result<br>ND        | PQL<br>1.5        | SPK value          | SPK Ref Val      | %REC                                   | LowLimit       | HighLimit          | %RPD | RPDLimit | Qual |
| Sample ID LC:                   | S-17363           | SampT               |                   |                    | Tes              | tCode: El                              | PA Method      | 300.0: Anion       | s    |          |      |
| Client ID: LC:<br>Prep Date: 1/ | SS<br>22/2015     | Batch<br>Analysis D | ID: 17<br>ate: 1/ |                    |                  | RunNo: <b>2</b> :<br>SeqNo: <b>7</b> ( |                | Units: <b>mg/k</b> | ζg   |          |      |
| Analyte<br>Chloride             |                   | Result<br>14        | PQL<br>1.5        | SPK value<br>15.00 | SPK Ref Val<br>0 | %REC<br>95.5                           | LowLimit<br>90 | HighLimit<br>110   | %RPD | RPDLimit | Qual |

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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WO#: 1501644 29-Jan-15

# **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Client: Project:	Atkins E MRWS	ngineering .	Associ	ates							
Sample ID	MB-17319	SampTy	ype: ME	BLK	Tes	tCode: E	PA Method	8015D: Dies	el Range G	Organics	
Client ID:	PBS	Batch	ID: 17	319	F	RunNo: 2	3817				
Prep Date:	1/20/2015	Analysis Da	ate: 1/	22/2015	S	SeqNo: 7	02614	Units: <b>mg/ł</b>	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	ND	10								
Motor Oil Rang	e Organics (MRO)	ND	50								
Surr: DNOP		7.9		10.00		78.9	63.5	128			
Sample ID	LCS-17319	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	LCSS	Batch	ID: 17	319	F	RunNo: 2	3817				
Prep Date:	1/20/2015	Analysis Da	ate: 1/	22/2015	5	SeqNo: 7	02618	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	53	10	50.00	0	105	67.8	130			
Surr: DNOP		5.2		5.000		104	63.5	128			
Sample ID	1501644-008AMS	D SampTy	ype: <b>M</b> \$	SD	Tes	tCode: E	PA Method	8015D: Dies	el Range (	Organics	
Client ID:	SS08	Batch	ID: 17	319	F	RunNo: 2	3817				
Prep Date:	1/20/2015	Analysis Da	ate: 1/	22/2015	5	SeqNo: 7	02981	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	68	9.9	49.55	38.65	58.3	29.2	176	7.80	23	
Surr: DNOP		4.9		4.955		98.4	63.5	128	0	0	
Sample ID	1501644-008AMS	SampTy	ype: MS	6	Tes	tCode: E	PA Method	8015D: Dies	el Range C	Organics	
Client ID:	SS08	Batch	ID: 17	319	F	RunNo: 2	3817				
Prep Date:	1/20/2015	Analysis Da	ate: 1/	22/2015	S	SeqNo: 7	03296	Units: <b>mg/ł</b>	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	73	10	50.20	38.65	68.4	29.2	176			
Surr: DNOP		5.0		5.020		99.8	63.5	128			

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - Р Sample pH greater than 2.
  - Reporting Detection Limit RL

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WO#: 1501644

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:		ngineering	Associ	ates							
Project:	MRWS										
Sample ID	MB-17313	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	PBS	Batch	ID: 17	313	F	RunNo: <b>2</b>	3812				
Prep Date:	1/20/2015	Analysis D	ate: 1/	21/2015	S	SeqNo: 7	02354	Units: <b>mg/k</b>	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	ND	5.0								
Surr: BFB		900		1000		90.2	80	120			
Sample ID	LCS-17313	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	LCSS	Batch	ID: 17	313	F	RunNo: 2	3812				
Prep Date:	1/20/2015	Analysis D	ate: 1/	/21/2015	S	SeqNo: 7	02355	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	25	5.0	25.00	0	100	65.8	139			
Surr: BFB		980		1000		97.7	80	120			
Sample ID	1501644-001AMS	SampT	ype: <b>M</b> \$	S	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	SS01	Batch	ID: 17	313	F	RunNo: 23812					
Prep Date:	1/20/2015	Analysis D	ate: 1/	/21/2015	5	SeqNo: 7	02357	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	27	4.8	24.20	0	112	47.9	144			
Surr: BFB		970		968.1		100	80	120			
Sample ID	1501644-001AMS	D SampT	уре: М	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	SS01	Batch	ID: <b>17</b>	313	F	RunNo: <b>2</b> 3	3812				
Prep Date:	1/20/2015	Analysis D	ate: 1/	/21/2015	5	SeqNo: 7	02358	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	je Organics (GRO)	29	4.8	24.22	0	118	47.9	144	4.79	29.9	
Surr: BFB		1000		969.0		105	80	120	0	0	

#### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

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WO#: **1501644** 

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	Atkins Engine	ering Asso	ciates							
Project:	MRWS									
Sample ID MB-173	5 <b>13</b> S	ampType: I	MBLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS		Batch ID:	17313	F	RunNo: <b>2</b> :	3812				
Prep Date: 1/20/2	015 Anal	ysis Date:	1/21/2015	S	SeqNo: 7	02387	Units: mg/K	g		
Analyte	Res	sult PQI	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND 0.05	50							
Toluene		ND 0.05	50							
Ethylbenzene		ND 0.05	50							
Xylenes, Total		ND 0.1	0							
Surr: 4-Bromofluorober	nzene	1.0	1.000		101	80	120			
Sample ID LCS-17	Sample ID LCS-17313 SampType: LCS TestCode: EPA Method 8021B: Volatiles									
	010 0	amp i ypc.	103	103		Amethou		lico		
Client ID: LCSS		Batch ID:			RunNo: 2		0021B. V01at			
Client ID: LCSS Prep Date: 1/20/2			17313	F		3812	Units: mg/K			
		Batch ID:	17313 1/21/2015	F	RunNo: 2	3812			RPDLimit	Qual
Prep Date: 1/20/2	015 Anal Res	Batch ID:	17313 1/21/2015 _ SPK value	F	RunNo: 2: SeqNo: 7	3812 02388	Units: mg/K	g	RPDLimit	Qual
Prep Date: 1/20/20 Analyte	015 Anal Res	Batch ID: ysis Date: sult PQI	<b>17313</b> <b>1/21/2015</b> <u>SPK value</u> 0 1.000	F S SPK Ref Val	RunNo: 23 SeqNo: 70 %REC	3812 02388 LowLimit	Units: <b>mg/K</b> HighLimit	g	RPDLimit	Qual
Prep Date: 1/20/20 Analyte Benzene	015 Anal Res	Batch ID: ysis Date: sult PQI 1.1 0.05	<b>17313</b> <b>1/21/2015</b> <u>SPK value</u> 0 1.000 0 1.000	F SPK Ref Val 0	RunNo: 2: SeqNo: 7( <u>%REC</u> 114	3812 02388 LowLimit 80	Units: <b>mg/K</b> HighLimit 120	g	RPDLimit	Qual
Prep Date: 1/20/20 Analyte Benzene Toluene	015 Anal Res	Batch ID: ysis Date: sult PQI 1.1 0.05 1.1 0.05	<b>17313</b> <b>1/21/2015</b> <b>SPK value</b> <b>50</b> 1.000 <b>50</b> 1.000 <b>50</b> 1.000	F SPK Ref Val 0 0	RunNo: 2: SeqNo: 70 <u>%REC</u> 114 109	3812 02388 LowLimit 80 80	Units: <b>mg/K</b> HighLimit 120 120	g	RPDLimit	Qual

**Qualifiers:** 

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery 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
  - P Sample pH greater than 2.
  - RL Reporting Detection Limit

Page 12 of 12

HALL
ANALYSIS
LABORATORY

### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ATK Work Order Number:	1501644		RcptNo:	1
Received by/date: 01/20/15				
Logged By: Lindsay Mangin 1/20/2015 1:25:00 PM		Junky Harry D		
Completed By: Lindsay Mangin 1/20/2015 1:35:27 PM		Junky Hogo		
Reviewed By: 50 01/20/15				
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🖌	No 🗌	Not Present 🗌	
3. How was the sample delivered?	<u>UPS</u>			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗔	NA 🗌	
5. Were all samples received at a temperature of $>0^{\circ}$ C to $6.0^{\circ}$ C	Yes 🗹	No 🗌		
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌	_	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?	Yes	No 🗌	No VOA Vials 🗹	
11, Were any sample containers received broken?	Yes 🖵	No 🗹 👘	# of preserved bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗌	•	or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗌	Adjusted?	
14. Is it clear what analyses were requested?	Yes 🗹	No 🗌 🗉	Oh a strad bur	
15.Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No	Checked by:	
<u>Special Handling (if applicable)</u>				
16. Was client notified of all discrepancies with this order?	Yes	No 🗍	NA 🗹	
Person Notified: Date:				
By Whom: Via:	eMail 🗌	Phone 🗌 Fax	In Person	
Regarding:				
Client Instructions:				
17. Additional remarks:				
18. <u>Cooler Information</u> Cooler No   Temp °C   Condition   Seal Intact   Seal No     1   1.6   Good   Yes	Seal Date	Signed By		

Cha	in-of	-Cus	Chain-of-Custody Record	I urn-Around Time:	ime:				I		U		Ca	Z	HALL ENVIRONMENTA		_	
Client: At	Kins K	11		X Standard	🗆 Rush				. <		۲. ۲	SI	23		ANALYSIS LABORATORY	<u>ē</u>	2	
	ASSA	A550() MLC	INC	Project Name:	≩				1	www.hallenvironmental.com	allenvi	ronme	ental.c	шо				
Mailing Address: 2004	ess:	1000	[3					4901 F	ławkii	4901 Hawkins NE - Albuquerque, NM 87109	- Alb	Juanbr	que, N	M 87	109			
	LOSU	That	10688 MV	Project #: $Z_{i}$	w/wr.w	21-UNS-EUN-15		Tel. 5	05-34	505-345-3975		Fax 50	Fax 505-345-4107	-410	7			
<sup>&gt;hone</sup> #:	575-	575- 624	- JUJO				_				Allaly		san ha					
email or Fax#:	# 200	منامم	Sompling a citinsering. Com	Project Manager		Chris Contez							sa					
JA/UC Fackage: X Standard	age:	, ⊔	Level 4 (Full Validation)							50013								
Accreditation	6			Sampler:	5. ANONEZ	22	_						2808					(N
		Other			X Yes	No							/ 5	(AC				JO
DEDD (Type)	))))))))))))))))))))))))))))))))))))))			Sample Temperature:	erature: /	<i>e</i> );					_						<u> </u>	۲) e
Date		Matrix	Sample Request ID	Container   Type and #	Preservative Type	HEAL No.	TEX)+ MT	TEX + M5	odtəM) He	ntsen) ad res) s'HA	CRA 8 Md	))))))))))))))))))))))))))))))))))))))	260B (VO	mə2) 072	1			ir Bubbles
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Date: Time:		Relinquished by	d by:	Received by:	$\geq$	r Dåte - Time						2	Though You	Xo	>			
If nece:	ssary, sam	nples subm	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	Intracted to other ac	credited laboratorie	ss. This serves as notice of th	idissoq si	ity. Any	sub-con	tracted d	ata will b	e clearly	notated	on the a	analytical	report.		]



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

March 11, 2015

Christopher Cortez Atkins Engineering Associates 2904 West Second Street Roswell, NM 88201 TEL: (575) 624-2420 FAX (575) 624-2421

RE: ZWLMRWS\_ENV\_15

OrderNo.: 1503087

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/3/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

**Analytical Report** 

Lab Order: 1503087

Hall Environ	mental Analys	sis Laborato	ory, Inc.		Date Reported: 3/11/2015
	Atkins Engineering A ZWLMRWS_ENV_1				Lab Order: 1503087
Lab ID: Client Sample ID:	1503087-001 SS01 (1')				Date: 2/26/2015 12:00:00 PM trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	240	30	mg/Kg	Analyst: LGT 20 3/5/2015 11:28:55 AM 18006
Lab ID: Client Sample ID:	1503087-002 SS01 (2')				Date: 2/26/2015 12:10:00 PM trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	80	30	mg/Kg	Analyst: LGT 20 3/5/2015 12:06:07 PM 18006
Lab ID: Client Sample ID:	1503087-003 SS09 (1')				Date: 2/26/2015 12:27:00 PM trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	46	30	mg/Kg	Analyst: <b>LGT</b> 20 3/5/2015 12:18:32 PM 18006
Lab ID: Client Sample ID:	1503087-004 SS09 (2')				Date: 2/26/2015 12:40:00 PM trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	150	30	mg/Kg	Analyst: LGT 20 3/5/2015 12:30:56 PM 18006
Lab ID: Client Sample ID:	1503087-005 SS02 (1')				Date: 2/26/2015 12:55:00 PM trix: SOIL
Analyses		Result	RL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	530	30	mg/Kg	Analyst: LGT 20 3/5/2015 12:43:21 PM 18006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- - Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit ND
- J Analyte detected below quantitation limits

Value exceeds Maximum Contaminant Level.

RSD is greater than RSDlimit 0

Qualifiers:

\*

Е

R RPD outside accepted recovery limits

Value above quantitation range

- S Spike Recovery outside accepted recovery limits
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Page 1 of 3

**Analytical Report** 

Lab Order: 1503087

Hall Environ	mental Analys	sis Laborato	ory, Inc.		Date Reported: 3/11/2015
	Atkins Engineering A ZWLMRWS_ENV_1				Lab Order: 1503087
Lab ID: Client Sample ID:	1503087-006 SS10 (1')				Date: 2/26/2015 1:13:00 PM trix: SOIL
Analyses		Result	RL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	).0: ANIONS	390	30	mg/Kg	Analyst: LGT 20 3/5/2015 1:20:34 PM 18006
Lab ID: Client Sample ID:	1503087-007 SS03 (1')				Date: 2/26/2015 1:25:00 PM trix: SOIL
Analyses		Result	RL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	540	30	mg/Kg	Analyst: LGT 20 3/5/2015 1:32:58 PM 18006
Lab ID: Client Sample ID:	1503087-008 SS03 (2')				Date: 2/26/2015 1:38:00 PM trix: SOIL
Analyses		Result	RL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	23	1.5	mg/Kg	Analyst: LGT 1 3/6/2015 9:21:59 PM 18006
Lab ID: Client Sample ID:	1503087-009 SS04 (1')				Date: 2/26/2015 1:58:00 PM trix: SOIL
Analyses		Result	RL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	350	30	mg/Kg	Analyst: <b>LGT</b> 20 3/5/2015 1:57:47 PM 18006
Lab ID: Client Sample ID:	1503087-010 SS04 (2')				Date: 2/26/2015 2:10:00 PM trix: SOIL
Analyses		Result	RL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	3.1	1.5	mg/Kg	Analyst: LGT 1 3/6/2015 9:34:23 PM 18006

11 17

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

ND

Not Detected at the Reporting Limit

Analyte detected in the associated Method Blank В Н Holding times for preparation or analysis exceeded

Value above quantitation range

J Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

Qualifiers:

\*

Е

- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Value exceeds Maximum Contaminant Level.

- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Page 2 of 3

WO#:	1503087

Client: Project:		ns Engineering ALMRWS_ENV_		ates							
Sample ID	MB-18006	SampTy	vpe: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 18	006	F	RunNo: 24	4667				
Prep Date:	3/5/2015	Analysis Da	ate: 3/	5/2015	S	SeqNo: 72	26998	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-18006	SampTy	vpe: LC	S	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 18	006	F	RunNo: 24	4667				
Prep Date:	3/5/2015	Analysis Da	ate: 3/	5/2015	S	SeqNo: 7	26999	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	92.9	90	110			

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - Р Sample pH Not In Range
  - RL Reporting Detection Limit

### HALL ENVIRONMENTAL ANALYSIS LABORATORY

### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: ATK	Work Order Number:	1503087		RcptNo:	1
Received by/date: JA c3/c3/	15				
Logged By: Anne Thorne	3/3/2015 9:55:00 AM		arme Arm	~	
Completed By: Anne Thorne	3/3/2015		anne Arm		
Reviewed By:	3/03/15		Cuna Ji Com		
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🗹	
2 Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?		<u>UPS</u>			
Log In	· ·				
4. Was an attempt made to cool the samples	?	Yes 🗹	No 🗌		
5. Were all samples received at a temperatur	e of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗌	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test	(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) prope	erly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
11. Were any sample containers received brok	ken?	Yes 🗆	No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH:	r >12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🗹	No 🗌	Adjusted?	
14. Is it clear what analyses were requested?		Yes 🗹	No 🗌		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date	···			]
By Whom:	 	eMail	Phone Fax	In Person	
Regarding:					
Client Instructions:	-				
17. Additional remarks:					-
18. Cooler Information					
	Seal Intact Seal No Sea	Seal Date	Signed By		
- <u></u>			· <u>-</u>		

Turn-Around Time: Froject Name: Project Name: ZUULMRUUS_ENV_15 ZUULMRUUS_ENV_15 Project Manager: Project Manager: Chvis CoWe2 Chvis CoWe2 Sampler: GA On Ice: X Yes In No Type and # HEAL No Type and # HEAL No Type and # Type Container Preservative HEAL No Totol Container Preservative HEAL No Container Preservative HEAL No Totol Container Preservative HEAL No	
Chain-of-Custody Record   Ient: At Knin S Englineer intervirting   ASSOCIONES: 2904 M. Shreet   ASSOCIONE M. M. 88301   Presure I M. And Street   Presure I M. M. 88301   Arce Package: Level 4 (Full Validation)   Standard Date   Time Matrix   Date Time   Matrix Sample Request ID   13:10 SSO4 (1 604)   13:12 SSO3 (1 604)   13:13 SSO3 (1 604)   13:13 SSO4 (1 604)   13:13 SSO4 (1 604	Relinquished by:

5 200 muy. Any đ BUILDE I TIS SERVES as atories. apod Balled acc If necessary, samples submitted to Hall Environmental may be subcontracted to other

## **Appendix C: Regulatory Correspondence**

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

					_	e, NM 8/3					
			Rel	ease Notifi	catio	on and Co	orrective A	ction			
						<b>OPERA</b>	TOR	Ini	tial Report 🔲 Final Report		
Name of Company Zia Water LLLP c/o Atkins Engineering Associates, Inc.						Contact Christopher Cortez (Atkins Engineering Associates, Inc.)					
Address 2904 W 2nd St, Roswell, NM 88201						Telephone No. 575.624.2420					
Facility Na	me Marathor	Road Water Sta	ation (MRWS	5)		Facility Typ	e Fresh Water Stati	on			
Surface Owner BLM Mineral Owner						unknown		APIN	API No. n/a		
				LOC	ATIC	ON OF RE	FASE				
Unit Letter	Section	Township	Range	Feet from the	h/South Line	Feet from the	East/West Line	County			
N	25	19S	34E	170	South		2237	West	Lea		
			La	titude_ <sup>32°37'28.</sup>	.46"N	Longitud	le_ <sup>103°30'54.33"V</sup>	V			
						E OF REL					
Type of Rele	ase Appare	nt Produced V	lator	INAJ	URI		Release unknow	Volume	Recovered 110 bbl		
		own Truck Du					Hour of Occurrence		d Hour of Discovery 1/6/15 7-8am		
Was Immedi	ate Notice (		-	-		If YES, To	Whom?				
			Yes [	No 🗌 Not R	equired				Hobbs Office, lvm with BLM Carlsbad		
By Whom?						Date and Hour 1/06/2015 at 10:03 am. If YES, Volume Impacting the Watercourse.					
Was a Water	course Read		Yes	No		IT YES, VO	fume Impacting	the watercourse.			
		pacted, Descr			-						
Describe Car	use of Proble	em and Reme	dial Action	Road V Voicem	Vater S nail left	tation (MRWS) at BLM-Carlsb	. Lea County She ad office. Dumping	riff contacted who g believed to occu	water filling ports at Marathon forwarded to NM State Police. Ir during the night of 1/05/2015 proximately 12:40pm 1/06/2015		
Describe Are	a Affected	and Cleanup A	Action Tak	ken.*				, <u>name</u> (			
1-2" soil sam Contractor an	ples sent to nd disposal of	Hall Environm	ental Anal explored.	ysis Laboratory fo	or chara ed with	field screening	EX, TPH, RCRA	Metals, Chlorides hoto-ionization de	al of standing fluids. Fluid and top Aqueous; BTEX, TPH-soil). tector, regraded and restored to spill area.		
regulations a public health should their or the enviro	ll operators or the envir operations h nment. In a	are required to ronment. The ave failed to a	o report an acceptance adequately OCD accept	nd/or file certain r ce of a C-141 report investigate and r	elease ort by the emedia	notifications as he NMOCD m ate contamination	nd perform correc arked as "Final R on that pose a thr	etive actions for re eport" does not re eat to ground wat	rsuant to NMOCD rules and eleases which may endanger elieve the operator of liability er, surface water, human health compliance with any other		
Signature:						OIL CONSERVATION DIVISION					
Printed Name: Christopher Cortez						Approved by Environmental Specialist:					
Title: Operations Manager						Approval Date: Expirati		Expiration	on Date:		
E-mail Address: chris@atkinseng.com						Conditions of Approval:			Attached		
Date: //	66/2	015	Phone:	575.624.2420	0						

\* Attach Additional Sheets If Necessary