District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ REVISED ☐ Final Report

Name of Company Benson-Montin-Greer Drilling Corp.	Contact Zach Stradling
Address 4900 College Blvd., Farmington, NM 87402	Telephone No. 505-325-8874
Facility Name Homestead Ranch #2	Facility Type Producing Well

Surface Owner Various Private	Mineral Owner Various Private	API No. 30-039-23586

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	34	25N	02W	990'	South	1850'	West	Rio Arriba, NM

Latitude N36.349903 Longitude W107.040127 NAD83

NATURE OF RELEASE

Type of Release Condensate	Volume of Release 40 bbls	Volume Recovered undetermined
Source of Release Condensate Tank	Date and Hour of Occurrence	Date and Hour of Discovery [illegible]
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Brandon Powell 2/25/08	
By Whom? Mike Dimond	Date and Hour 2/25/08	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

OIL CONS. DIV DIST. 3

SEP 15 2017

SEP 15 2017

OIL CONS. DIV DIST. 3

Describe Cause of Problem and Remedial Action Taken.*

Valve failure on 400-bbl condensate tank released into secondary containment berm. Approx. 3 cy soil excavated and transported to BMG landfarm. See previously submitted investigation and remediation reports. See attached Remediation Plan for further proposed remedial action.

Describe Area Affected and Cleanup Action Taken.*

Please see attached report for additional information.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Zach Stradling	Approved by Environmental Specialist:
Title: Vice President	Approval Date: 9/22/17 Expiration Date:
E-mail Address: zstradling@bmgdrilling.com	Conditions of Approval: Attached ☒
Date: 9/5/17 Phone: 505-325-8874	

* Attach Additional Sheets If Necessary

NSK1206030214

32

Smith, Cory, EMNRD

From: Fields, Vanessa, EMNRD
Sent: Friday, September 22, 2017 2:06 PM
To: Smith, Cory, EMNRD
Subject: FW: BMG Homestead Ranch #002 (old release)
Attachments: BMG Homestead Ranch 002 Remediation Plan 053017-2.pdf

---

From: Fields, Vanessa, EMNRD
Sent: Thursday, June 1, 2017 4:05 PM
To: 'Elizabeth McNally' <emcnally@animasenvironmental.com>
Cc: Zach Stradling <zstradling@bmgdrilling.com>; Robert Flegal <rflegal@animasenvironmental.com>; Karen Lupton <klupton@animasenvironmental.com>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Subject: RE: BMG Homestead Ranch #002 (old release)

Good Afternoon Beth,

The OCD has reviewed the Soil Remediation plan for the Benson-Montin-Greer (BMG) Homestead Ranch #002 prepared by Animas Environmental Services, LLC (AES). The OCD has approved the Remediation plan with the following conditions of approval.

- Soil samples shall be tested for the following constituents. Benzene of 10 mg/kg, BTEX of 50 mg/kg, and TPH (GRO,DRO,MRO) of 1,000 mg/kg.
- Provide the OCD with 48 hour notice for sampling events.
- Borehole confirmation samples for closure will be collected at 5-ft in intervals. If an Borehole shows no signs of hydrocarbon impacts, (No staining, no OVM, uniform lithology) an alternative sampling rate may be proposed and approved prior to submitting the samples to the lab, provided an OCD representative is on-site to witness sampling.
- "*Impact will be defined by OVM (PID) measurements exceeding 100 ppm. "
    - Impacts will also be defined by stained or wet soils that are obvious signs of hydrocarbon impacts.
- Borehole placement has been modified, please refer to attached site diagram
- LEL levels need to be checked weekly by conducting a site walk through. LEL levels over 10 ppm shall be reported to the OCD.

Please send in an updated C-141 with the plan you emailed. A copy of these conditions will be attached to the C-141.

Please let me know if you have any questions.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources

1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Elizabeth McNally [mailto:emcnally@animasenvironmental.com]
Sent: Tuesday, May 30, 2017 5:25 PM
To: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Cc: Zach Stradling <zstradling@bmgdrilling.com>; Robert Flegal <rflegal@animasenvironmental.com>; Karen Lupton <klupton@animasenvironmental.com>
Subject: RE: BMG Homestead Ranch #002 (old release)

Hi Vanessa,
Attached please find the remediation plan for the older release at Homestead Ranch 002. I will be in Wednesday and Thursday if we need to clarify anything or make changes.
Please give a call with anything!

Thanks
Beth

Elizabeth McNally, PE
Principal
Animas Environmental Services, LLC
www.animasenvironmental.com
604 W Pinon St, Farmington NM (Tel) 505.564.2281
1911 N Main St, Ste 206, Durango CO (Tel) 970.403.3084

From: Fields, Vanessa, EMNRD [mailto:Vanessa.Fields@state.nm.us]
Sent: Thursday, May 25, 2017 10:49 AM
To: Elizabeth McNally <emcnally@animasenvironmental.com>
Cc: Robert Flegal <rflegal@animasenvironmental.com>; Zach Stradling <zstradling@bmgdrilling.com>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
Subject: RE: BMG Homestead Ranch #002 (old release)

Good morning Beth,

Per our phone conversation this morning it is okay to submit the remediation plan early next week. If the plan is received to the OCD by the close of business on Tuesday May 30, 2017, the OCD will expedite the review and approval.

At this time the OCD does not object to BMG proposing to utilize two SVE vacuum pump assemblies instead of one.

As discussed in the meeting on May 23, 2017, if BMG utilizes the SVE system at the Homestead Ranch #002 full remediation with confirmation wells will need to be drilled by September 25, 2017 demonstrating full remediation. If the analytical results do not show remediation level's below 10 ppm/Benzene, 50 ppm/ BTEX and 1,000 TPH (GRO/DRO/MRO) BMG will be required to remediate by mechanical excavation.

Please let me know if you have any questions

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Elizabeth McNally [mailto:emcnally@animasenvironmental.com]
Sent: Thursday, May 25, 2017 9:09 AM
To: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Cc: Robert Flegal <rflegal@animasenvironmental.com>; Zach Stradling <zstradling@bmgdrilling.com>
Subject: BMG Homestead Ranch #002 (old release)

Hi Vanessa,
Based on our phone call this morning, could you confirm my understanding of the path forward for remediation activities at this site?

- Remediation Plan is ok to submit early next week (week of May 29th);
- Within plan, ok to present proposed plan to operate SVE system for up to 120 days, with results of work presented to NMOCD in 120 days;
- Based on demonstrated effectiveness of SVE operations and in consultation with NMOCD, we could either propose to continue with SVE or excavate and remove contaminated soils;
- Remediation plan will include proposal to run two SVE vacuum pump assemblies, instead of one.

Please let me know if this makes sense. Thanks for your help and have a great holiday weekend!
Beth

Elizabeth McNally, PE
Principal
Animas Environmental Services, LLC
www.animasenvironmental.com
604 W Pinon St, Farmington NM (Tel) 505.564.2281
1911 N Main St, Ste 206, Durango CO (Tel) 970.403.3084

May 30, 2017

Vanessa Fields
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Remediation Plan for the BMG Homestead Ranch #2 Well Location
SW¼, SW¼ of Section 34, T25N, R2W, Rio Arriba County, New Mexico

Dear Ms. Fields:

Animas Environmental Services, LLC (AES), on behalf of Benson Montin Greer Drilling Corporation (BMG), has prepared this Remediation Plan for the BMG Homestead Ranch #2 Well Location, Rio Arriba County, New Mexico. This Remediation Plan details proposed continued site remediation activities for the older release at the site (2008) which were discussed in a project meeting with BMG, AES, and the New Mexico Oil Conservation Division (NMOCD) on Monday, May 22, 2017.

1.0 General Site Information

2.1 Site Location

The BMG Homestead Ranch #2 well site is located in the SW¼, SW¼ of Section 34, T25N, R2W, Rio Arriba County, New Mexico, and is part of BMG's Gavilan gathering area. A topographic site location map, based on the USGS 7.5-minute Lindrith, Rio Arriba County, New Mexico topographic quadrangle (USGS 1963), is included as Figure 1. A site plan illustrating the general site layout and 2008 release location is presented as Figure 2.

2.2 Site History

January 2008
BMG personnel discovered that a valve failure on a 400-barrel (bbl) condensate tank (Tank #2) had resulted in a release of approximately 40 bbl (1,680 gallons) into an earthen secondary containment area surrounding Tanks #1, #2 and #3. The spill was reported to Mr. Brandon Powell of the NMOCD on February 25, 2008.

Subsequent to the NMOCD notification, BMG's Killer B roust-a-bout crew excavated approximately three cubic yards of contaminated soil and transported it to the BMG Centralized Surface Waste Management Facility for disposal. No free liquids were recovered from the secondary containment area, and because the release consisted of

condensate (not crude oil) there was no visible staining observed during initial excavation. The spill was contained within the secondary containment berm surrounding Tanks #1, #2 and #3, but the site investigation conducted by AES in April 2008 confirmed that contamination had migrated vertically below the containment area to a depth of approximately 30 feet below ground surface (bgs). Because the condensate was volatile and because subsurface conditions were conducive to vapor extraction, a soil vapor extraction system was proposed.

May 2010

AES installed five soil borings in and around the area of the spill. All soil borings (SVE-1 through SVE-5) were installed to a depth between 44 feet bgs and 48 feet bgs. Soil borings SVE-1 through SVE-5, were advanced with a CME-75 drill rig. Three of the soil borings were completed as soil vapor extraction wells (SVE-1, SVE-2, and SVE-3) and two were installed as passive air inlet/observation wells (SVE-4 and SVE-5). All five wells were installed to depths between 44 and 48 feet bgs. Soil lithology was observed to consist of interbedded layers of pale brown and red-brown sands and brown sandy clays throughout the site. No groundwater was encountered during installation of borings and subsequent SVE wells.

June through September 2010

A mobile SVE remediation system was operated at the site between June and September 2010. The system consisted of a trailer-mounted remediation unit designed around the use of an internal combustion engine (ICE) to provide high (>20" Hg) vacuum for conducting multi-phase (vapor/liquid) extraction (MPE) and treatment. Operations for 2010 are summarized below:

SVE Remediation System Summary
Homestead Ranch #2 Well Location
Rio Arriba County, New Mexico

Parameters	*Mass (lbs)*	*Volume (gal)*
Original Release - Estimated Petroleum Hydrocarbon Mass and Volume	10,416 lbs	1,680 gallons
Estimated Petroleum Hydrocarbons Removed As Supplemental Fuel Source (RSI)* *does not include mass removal via biodegradation.*	6,435 lbs	1,037 gallons
Percent Removed in 2010	**62%**	**62%**

2011

AES conducted vapor sampling in August 2011 to monitor vapor concentrations and potential rebound. Laboratory analytical results for the collected samples indicate that the BTEX compounds and TPH-GRO were present in each of the analytical samples. Benzene concentrations were between 52 ppm-v in SVE-1 and 130 ppm-v in SVE-2. Ethylbenzene

ranged from 6.4 ppm-v in SVE-3 to 22 ppm-v in SVE-2, and total xylenes ranged from 61 ppm-v in SVE-3 to 170 ppm-v in SVE-2.

2015

AES conducted vapor sampling again in May 2015 to monitor attenuation and evaluate for potential rebound. Laboratory analytical results for the collected samples indicate that the BTEX compounds and TPH-GRO were still present in each of the analytical samples; however, concentrations confirmed continued biodegradation of petroleum hydrocarbon contaminants. Benzene ranged from 4.38 ppm-v in SVE-1 to 19.72 ppm-v in SVE-2, and toluene concentrations were between 24.68 ppm-v in SVE-1 and 90.23 ppm-v in SVE-2. Ethylbenzene ranged from 4.15 ppm-v in SVE-1 to 12.9 ppm-v in SVE-2, and total xylenes were between 29.94 ppm-v in SVE-1 to 105.93 ppm-v in SVE-2.

Residual Soil Vapor Concentration Reductions
Homestead Ranch #2 Well Location
Rio Arriba County, New Mexico

SVE ID#	*Date*	*Benzene (ppm-v)*	*Toluene (ppm-v)*	*Ethylbenzene (ppm-v)*	*Totals Xylenes (ppm-v)*
SVE-1	8/10/2011	10	52	9.5	74
SVE-1	5/21/2015	4.38	24.68	4.15	29.94
	% Reduction	**56%**	**53%**	**56%**	**60%**
SVE-2	8/10/2011	30	130	22	170
SVE-2	5/21/2015	19.72	90.23	12.9	105.93
	% Reduction	**34%**	**31%**	**41%**	**38%**
SVE-3	8/10/2011	9.2	64	6.4	61
SVE-3	5/21/2015	5.01	37.15	4.38	39.15
	% Reduction	**46%**	**42%**	**32%**	**36%**

2.0 Proposed Remediation Plan

AES will be utilizing the existing SVE wells installed in 2010 to further remediate the BMG Homestead Ranch #2 site. A mobile SVE remediation system is planned to be placed at the site, with scheduling and operations as follows:

1. **Baseline Soil Vapor Sampling**: AES will conduct initial SVE vapor sampling of each well (SVE-1 through SVE-3) for laboratory analysis of TPH-GRO and BTEX in early June 2017. Vapors will be laboratory analyzed for BTEX per USEPA 8021 and TPH (GRO) per USEPA 8015. Results will be utilized as baseline readings and help determine mass removal during SVE operations.

2. **SVE Operations**: Following the initial sampling, AES will install an electric SVE system at the location in early June 2017. The unit is scheduled to run for a total of 90 days from installation. Each SVE well will be drawn upon separately (i.e. sequentially) for two weeks in order to maximize subsurface air flow velocities, followed by a pulsing period (one to two weeks) to allow the subsurface to return to equilibrium.

3. **Vapor Sampling**: Vapor samples will be collected every two weeks, for both the well being removed from sequence as well as the well being activated at that time. Additionally, vapor samples will also be collected at the outlet of the treated vapors to confirm controlled emission concentrations.

    a. Samples will be collected with Tedlar bags and a vacuum pump and submitted to Hall Environmental Analysis Laboratory (Hall) for analysis.
    b. Vapor samples will be laboratory analyzed for the following:

Vapor Sampling Laboratory Parameters During SVE		
USEPA METHOD 8015B	Laboratory Detection Limit	Units
TPH - Gasoline Range Organics (GRO)	5	µg/L
USEPA METHOD 8021B: Volatiles		
Benzene	0.10	µg/L
Toluene	0.10	µg/L
Ethylbenzene	0.10	µg/L
Xylenes, Total	0.30	µg/L

4. **SVE Equipment:** The SVE unit will consist of a 1 HP Gast regenerative blower powered via electrical connection on site. Although groundwater is not present within the SVE wells, a knockdown vessel (to collect moisture from the vapor stream) will precede the blower, as well as a particulate air filter to preserve the

vacuum unit. An inlet sample port/pitot tube allows collection of samples and recording of system flow. Vacuum and temperature gauges in front of the unit will monitor system performance and be recorded. On the exit side of the blower, temperature and pressure gauges will also be present, and the blower will be direct to a series of two granular activated carbon (GAC) units in series to absorb any vapors. GAC drums will be replaced in service as needed. See Figure 3 for a process flow diagram.

In the event it is indicated from sampling, a second, similar unit will be added to the site to accelerate the remediation. Both units would utilize the GAC units for vapor treatment prior to emission.

5. **Safety:** Warning signs will be added to the site to caution of the presence of the SVE equipment. A wind sock will be installed on the unit's exit piping to indicate wind magnitude and direction for those approaching the units. A site specific Health and Safety Plan will be prepared prior to site work and will be reviewed upon as part of the daily tailgate safety meeting. Additionally, the land owner will be contacted and notified by BMG with the scheduled remediation activities.

6. **Soil Confirmation Borings:** At the end of three month run period, AES will complete final vapor sampling, and five soil confirmation borings will be advanced in order to collect confirmation soil samples for laboratory analysis. Borings will be advanced with either a DT 6620 track-mounted direct push rig, manufactured by GeoProbe, or with a Mobile B-55 hollow stem auger rig. Confirmation soil samples will be collected, and results will be received and submitted to NMOCD before September 25, 2017.

    a. **Locations** – soil confirmation borings (SCB-1 through SCB-5) will be located with one boring in the center of the release area (near SVE-2), and the other four borings located in each cardinal direction and within the berm footprint. Proposed locations are included on Figure 4.

    b. **Depths** – SCB-1, located in the center of the release location, will be advanced to at least a depth of 50 feet, with samples collected at 10-ft intervals for field screening and sample collection. *Note that based on the 2008 Site Investigation, contaminant concentrations were detected above NMOCD action levels at 20 feet bgs but were all below either laboratory detection levels or well below action levels in TH-1 at 40 feet bgs.* SCB-2 through SCB-5 will be advanced to at least the depth of SCB-1 in order to accurately confirm residual contaminant concentrations.

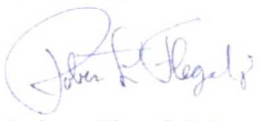
    c. **Soil Samples** - soil samples will be collected at 10 ft intervals and from the terminal depth of the borings for lithologic logging and field screening via

OVM and field TPH (via USEPA 418.1). Soil samples from the interval with the highest OVM and field TPH readings will be submitted for laboratory analysis, along with samples from the terminal depth of each boring. In the event that all samples show non-detectable concentrations of OVMs and field TPH results, then only the sample from the terminal depth of the boring will be submitted for laboratory analysis. Samples will be analyzed for BTEX per USEPA 8021 and TPH (GRO, DRO, MRO) per USEPA 8015.

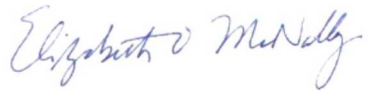
7. If soil concentrations are **below** risk based action levels of 10 mg/kg benzene, 50 mg/kg total BTEX, and 1,000 mg/kg TPH (GRO, DRO, and MRO), then BMG will request NFA. If soil concentrations are above risk based action levels, then excavation option will be utilized with either on-site or off-site treatment.

If you have any questions about site conditions or this Remediation Plan, please do not hesitate to contact me at 505.564.2281.

Sincerely,



Robert Flegal, P.E.



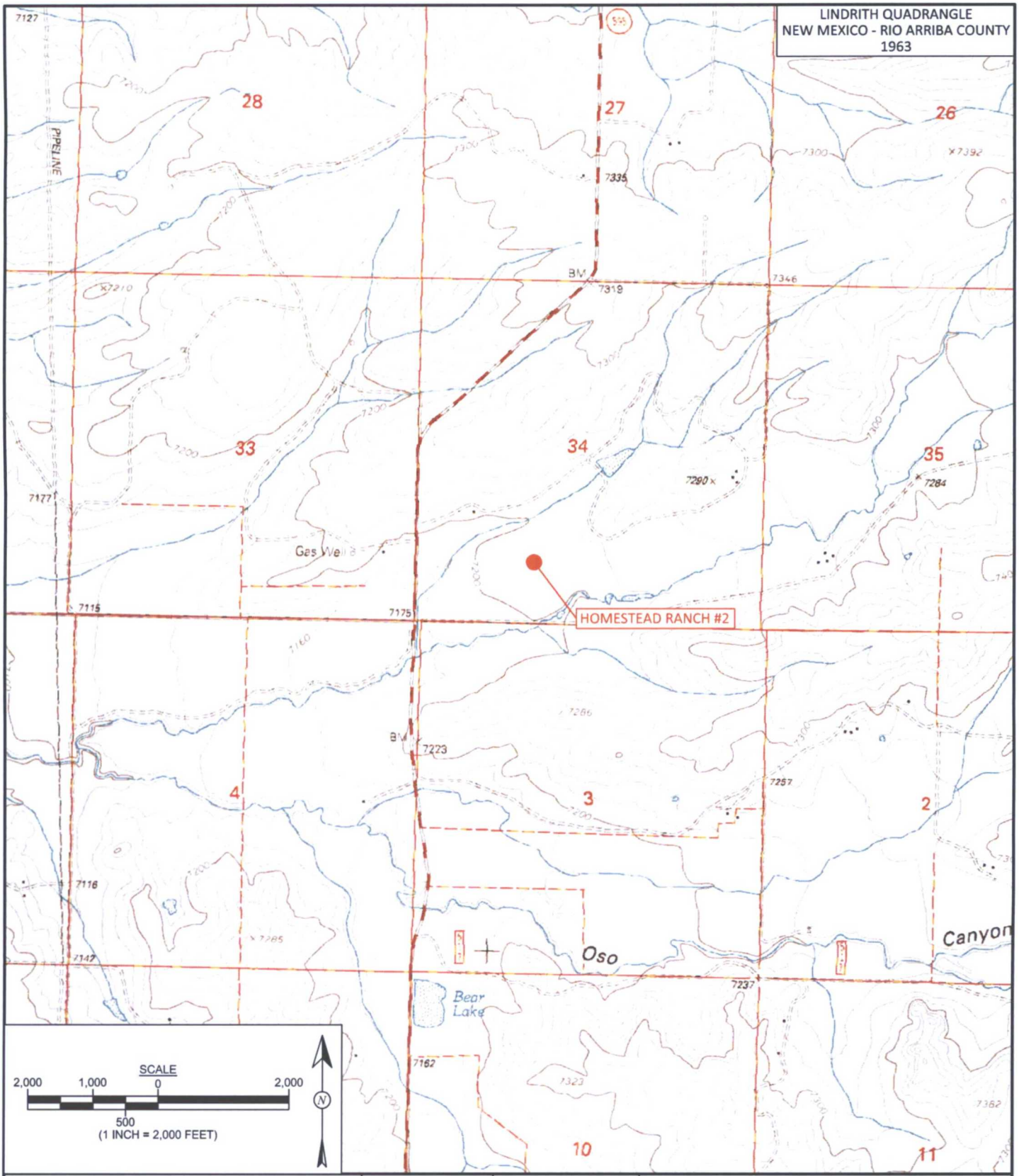
Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Map Site Location Map
Figure 2. SVE Layout
Figure 3. SVE Process Flow Diagram
Figure 4. Soil Confirmation Boring Locations

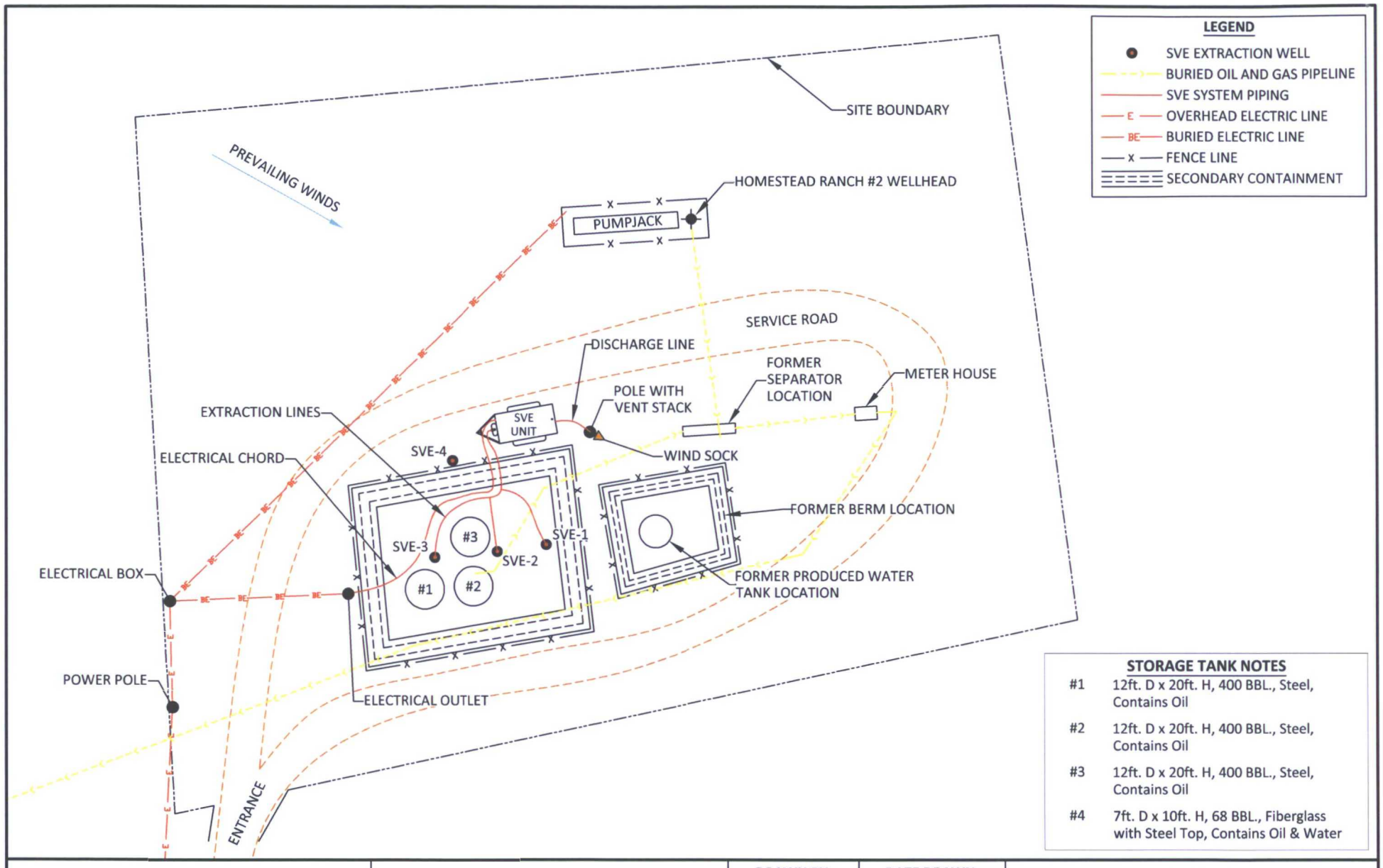
cc: Matt Dimond
Zach Stradling
Benson-Montin-Greer Drilling Corporation
4900 College Blvd
Farmington, NM 87402

R:\Animas 2000\Dropbox (Animas Environmental)\0000 AES Server Client Projects Dropbox\2017 Client Projects\BMG\Homestead Ranch #2\Reports and Workplans\Periodic Progress Report 051817.docx



DRAWN BY: S. Glasses	**DATE DRAWN:** April 26, 2017	**FIGURE 1**	
REVISIONS BY: C. Lameman	**DATE REVISED:** May 26, 2017	**TOPOGRAPHIC SITE LOCATION MAP** BENSON-MONTIN-GREER HOMESTEAD RANCH #2 SE ¼ SW ¼, SECTION 34, T25N, R2W RIO ARRIBA COUNTY, NEW MEXICO N36.34990, W107.04006	
CHECKED BY: E. McNally	**DATE CHECKED:** May 26, 2017		
APPROVED BY: E. McNally	**DATE APPROVED:** May 26, 2017		

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com



SCALE
40 20 0 40
10
(1 INCH = 40 FEET)

N

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animasenvironmental.com

DRAWN BY: C. Lameman	DATE DRAWN: May 26, 2017
REVISIONS BY: C. Lameman	DATE REVISED: May 26, 2017
CHECKED BY: B. Flegal	DATE CHECKED: May 26, 2017
APPROVED BY: B. Flegal	DATE APPROVED: May 26, 2017

FIGURE 2

SVE LAYOUT
BENSON-MONTIN-GREER
HOMESTEAD RANCH #2
SE ¼ SW ¼, SECTION 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N36.34990, W107.04006

Regenerative Blower
SVE Example

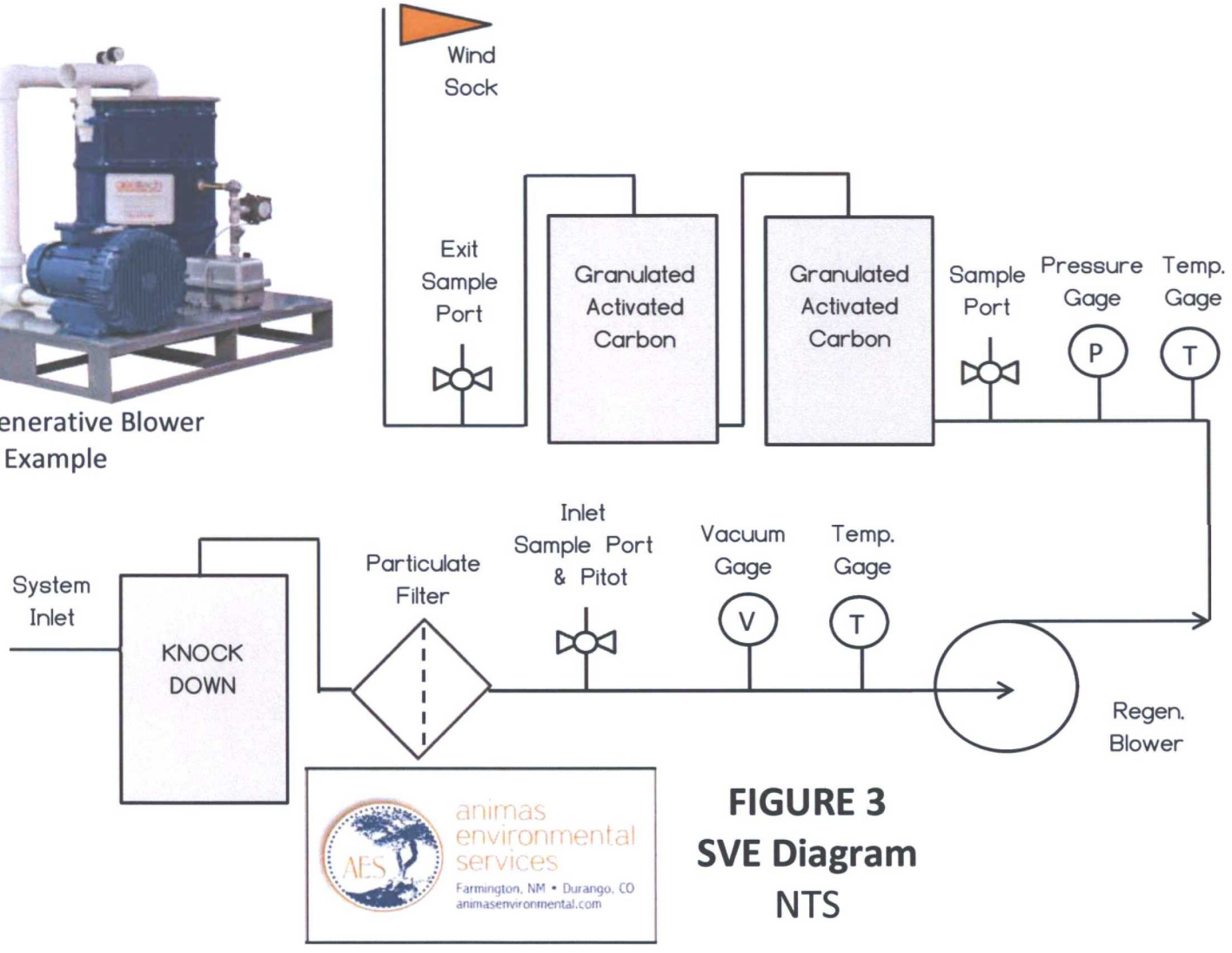

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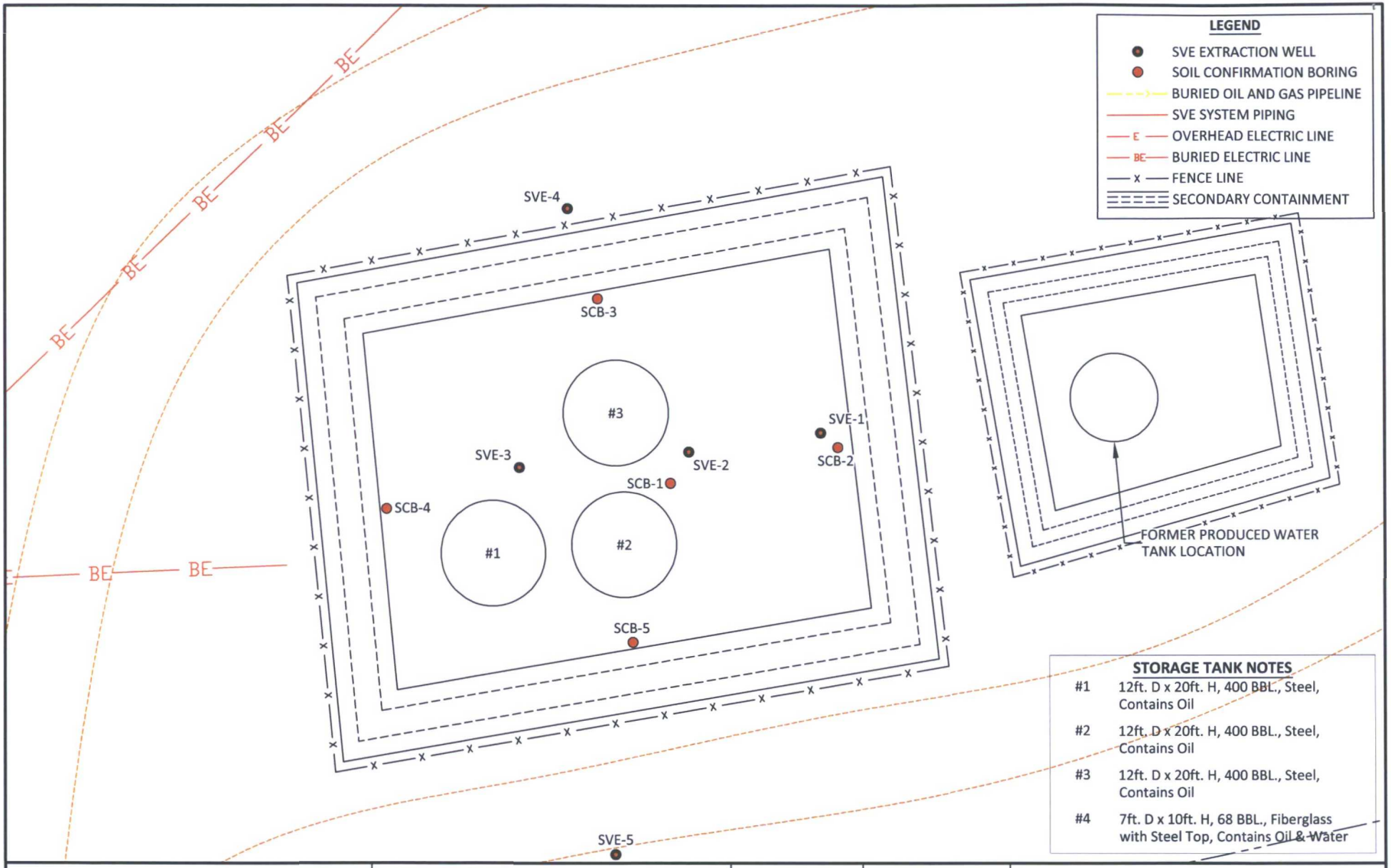
FIGURE 3
SVE Diagram
NTS



STORAGE TANK NOTES

#1	12ft. D x 20ft. H, 400 BBL., Steel, Contains Oil
#2	12ft. D x 20ft. H, 400 BBL., Steel, Contains Oil
#3	12ft. D x 20ft. H, 400 BBL., Steel, Contains Oil
#4	7ft. D x 10ft. H, 68 BBL., Fiberglass with Steel Top, Contains Oil & Water

SCALE
40 20 0 40
10
(1 INCH = 40 FEET)

N

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY: S. Glasses	**DATE DRAWN:** May 30, 2017
REVISIONS BY: S. Glasses	**DATE REVISED:** May 30, 2017
CHECKED BY: B. Flegal	**DATE CHECKED:** May 30, 2017
APPROVED BY: McNally	**DATE APPROVED:** May 30, 2017

FIGURE 4

SVE LAYOUT AND SOIL CONFIRMATION BORING LOCATIONS
BENSON-MONTIN-GREER
HOMESTEAD RANCH #2
SE ¼ SW ¼, SECTION 34, T25N, R2W
RIO ARRIBA COUNTY, NEW MEXICO
N36.34990, W107.04006

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

August 17, 2017

R Flegal

Animas Environmental Services
604 Pinon Street
Farmington, NM 87401
TEL: (505) 564-2281
FAX (505) 324-2022

RE: BMG Homestead Ranch 2 OrderNo.: 1708797

Dear R Flegal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/12/2017 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 www.hallenvironmental.com 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 qualifiers 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1708797**
Date Reported: **8/17/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: BMG Homestead Ranch 2
Lab ID: 1708797-001 **Matrix:** MEOH (SOIL)

Client Sample ID: SB-1 @ 10'
Collection Date: 8/10/2017 9:12:00 AM
Received Date: 8/12/2017 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	520	9.2		mg/Kg	1	8/14/2017 10:13:54 AM	33344
Motor Oil Range Organics (MRO)	86	46		mg/Kg	1	8/14/2017 10:13:54 AM	33344
Surr: DNOP	96.0	70-130		%Rec	1	8/14/2017 10:13:54 AM	33344
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	450	25		mg/Kg	10	8/14/2017 11:37:22 AM	G44943
Surr: BFB	661	54-150	S	%Rec	10	8/14/2017 11:37:22 AM	G44943
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.12		mg/Kg	10	8/14/2017 11:37:22 AM	B44943
Toluene	ND	0.25		mg/Kg	10	8/14/2017 11:37:22 AM	B44943
Ethylbenzene	ND	0.25		mg/Kg	10	8/14/2017 11:37:22 AM	B44943
Xylenes, Total	17	0.50		mg/Kg	10	8/14/2017 11:37:22 AM	B44943
Surr: 4-Bromofluorobenzene	133	66.6-132	S	%Rec	10	8/14/2017 11:37:22 AM	B44943

OIL CONS. DIV DIST. 3

SEP 15 2017

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SB-1 @ 15'
Project: BMG Homestead Ranch 2
Collection Date: 8/10/2017 9:17:00 AM
Lab ID: 1708797-002 **Matrix:** MEOH (SOIL) **Received Date:** 8/12/2017 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1300	20		mg/Kg	2	8/14/2017 11:20:18 AM	33344
Motor Oil Range Organics (MRO)	190	98		mg/Kg	2	8/14/2017 11:20:18 AM	33344
Surr: DNOP	106	70-130		%Rec	2	8/14/2017 11:20:18 AM	33344
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	1200	30		mg/Kg	10	8/14/2017 12:01:22 PM	G44943
Surr: BFB	970	54-150	S	%Rec	10	8/14/2017 12:01:22 PM	G44943
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.15		mg/Kg	10	8/14/2017 12:01:22 PM	B44943
Toluene	ND	0.30		mg/Kg	10	8/14/2017 12:01:22 PM	B44943
Ethylbenzene	ND	0.30		mg/Kg	10	8/14/2017 12:01:22 PM	B44943
Xylenes, Total	82	0.60		mg/Kg	10	8/14/2017 12:01:22 PM	B44943
Surr: 4-Bromofluorobenzene	151	66.6-132	S	%Rec	10	8/14/2017 12:01:22 PM	B44943

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708797**

17-Aug-17

Client: Animas Environmental Services

Project: BMG Homestead Ranch 2

Sample ID **1708797-001AMS**	SampType: **MS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **SB-1 @ 10'**	Batch ID: **33344**			RunNo: **44937**					
Prep Date: **8/14/2017**	Analysis Date: **8/14/2017**			SeqNo: **1421354**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	610	10	49.95	519.1	185	55.8	122			S
Surr: DNOP	5.1		4.995		101	70	130			

Sample ID **1708797-001AMSD**	SampType: **MSD**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **SB-1 @ 10'**	Batch ID: **33344**			RunNo: **44937**					
Prep Date: **8/14/2017**	Analysis Date: **8/14/2017**			SeqNo: **1421355**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	530	9.7	48.45	519.1	27.4	55.8	122	13.8	20	S
Surr: DNOP	2.4		4.845		49.9	70	130	0	0	S

Sample ID **LCS-33344**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **33344**			RunNo: **44937**					
Prep Date: **8/14/2017**	Analysis Date: **8/14/2017**			SeqNo: **1421358**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.2	73.2	114			
Surr: DNOP	4.4		5.000		87.1	70	130			

Sample ID **MB-33344**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **33344**			RunNo: **44937**					
Prep Date: **8/14/2017**	Analysis Date: **8/14/2017**			SeqNo: **1421359**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		90.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708797**

17-Aug-17

Client: Animas Environmental Services

Project: BMG Homestead Ranch 2

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G44943**	RunNo: **44943**
Prep Date:	Analysis Date: **8/14/2017**	SeqNo: **1422561** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		92.6	54	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G44943**	RunNo: **44943**
Prep Date:	Analysis Date: **8/14/2017**	SeqNo: **1422562** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.9	76.4	125			
Surr: BFB	1000		1000		103	54	150			

Sample ID **MB-33358**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **33358**	RunNo: **44943**
Prep Date: **8/14/2017**	Analysis Date: **8/15/2017**	SeqNo: **1422860** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	780		1000		78.3	54	150			

Sample ID **LCS-33358**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **33358**	RunNo: **44943**
Prep Date: **8/14/2017**	Analysis Date: **8/15/2017**	SeqNo: **1422862** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		88.8	54	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708797**

17-Aug-17

Client: Animas Environmental Services

Project: BMG Homestead Ranch 2

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B44943**	RunNo: **44943**
Prep Date:	Analysis Date: **8/14/2017**	SeqNo: **1422601** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		123	66.6	132			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B44943**	RunNo: **44943**
Prep Date:	Analysis Date: **8/14/2017**	SeqNo: **1422602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		122	66.6	132			

Sample ID **MB-33358**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **33358**	RunNo: **44943**
Prep Date: **8/14/2017**	Analysis Date: **8/15/2017**	SeqNo: **1422882** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	66.6	132			

Sample ID **LCS-33358**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **33358**	RunNo: **44943**
Prep Date: **8/14/2017**	Analysis Date: **8/15/2017**	SeqNo: **1422884** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	66.6	132			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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: **Animas Environmental** Work Order Number: **1708797** RcptNo: **1**

Received By: **Andy Freeman** **8/12/2017 10:05:00 AM**

Completed By: **Ashley Gallegos** **8/13/2017 4:03:53 PM**

Reviewed By: ENM 8/14/17

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?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature 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) 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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
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 ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

☐ Standard X Rush: SAME DAY

Mailing Address: 604 W Pinon St.
Farmington, NM 87401

Phone #: 505-564-2281

Email or Fax#: rflegal@animasenvironmental.com

QA/QC Package:
X Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Project Name: BMG Homestead Ranch #2

Project #:

Project Manager: R. Flegal

Sampler: CL

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1708797	BTEX - 8021B	TPH (GRO/DRO/MRO) - 8015	Air Bubbles (Y or N)
8/10/17	9:12	SOIL	SB-1 @ 10'	1-MeOH Kit 2 - 4 oz jars	MeOH Cool	-001	X	X	
8/10/17	9:17	SOIL	SB-1 @ 15'	1-MeOH Kit 2 - 4 oz jars	MeOH Cool	-002	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/11/17	1419			8/11/17	1419
8/11/17	1917			8/12/17	1005

Remarks: Bill to AES

Please call with any questions

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

August 21, 2017

R Flegal
Animas Environmental Services
604 Pinon Street
Farmington, NM 87401
TEL: (505) 564-2281
FAX (505) 324-2022

RE: BMG Homestead Ranch 2 OrderNo.: 1708798

Dear R Flegal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/12/2017 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 www.hallenvironmental.com 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 qualifiers 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1708798**
Date Reported: **8/21/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: BMG Homestead Ranch 2
Lab ID: 1708798-001 **Matrix:** SOIL

Client Sample ID: SB-1 @ 5'
Collection Date: 8/10/2017 9:00:00 AM
Received Date: 8/12/2017 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	130	9.9		mg/Kg	1	8/17/2017 9:21:28 PM	33400
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	8/17/2017 9:21:28 PM	33400
Surr: DNOP	95.4	70-130		%Rec	1	8/17/2017 9:21:28 PM	33400
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/16/2017 10:20:07 AM	33368
Surr: BFB	83.1	54-150		%Rec	1	8/16/2017 10:20:07 AM	33368
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	8/16/2017 10:20:07 AM	33368
Toluene	ND	0.046		mg/Kg	1	8/16/2017 10:20:07 AM	33368
Ethylbenzene	ND	0.046		mg/Kg	1	8/16/2017 10:20:07 AM	33368
Xylenes, Total	ND	0.093		mg/Kg	1	8/16/2017 10:20:07 AM	33368
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	1	8/16/2017 10:20:07 AM	33368

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SB-1 @ 20'
Project: BMG Homestead Ranch 2
Collection Date: 8/10/2017 9:24:00 AM
Lab ID: 1708798-002 **Matrix:** SOIL **Received Date:** 8/12/2017 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	8/17/2017 1:44:52 PM	33400
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/17/2017 1:44:52 PM	33400
Surr: DNOP	97.4	70-130		%Rec	1	8/17/2017 1:44:52 PM	33400
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2017 10:44:04 AM	33368
Surr: BFB	81.2	54-150		%Rec	1	8/16/2017 10:44:04 AM	33368
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	8/16/2017 10:44:04 AM	33368
Toluene	ND	0.047		mg/Kg	1	8/16/2017 10:44:04 AM	33368
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2017 10:44:04 AM	33368
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2017 10:44:04 AM	33368
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	1	8/16/2017 10:44:04 AM	33368

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1708798**
Date Reported: **8/21/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: BMG Homestead Ranch 2
Lab ID: 1708798-003 **Matrix:** SOIL

Client Sample ID: SB-1 @ 25'
Collection Date: 8/10/2017 9:32:00 AM
Received Date: 8/12/2017 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/17/2017 2:13:09 PM	33400
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2017 2:13:09 PM	33400
Surr: DNOP	95.8	70-130		%Rec	1	8/17/2017 2:13:09 PM	33400
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2017 11:08:03 AM	33368
Surr: BFB	83.0	54-150		%Rec	1	8/16/2017 11:08:03 AM	33368
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	8/16/2017 11:08:03 AM	33368
Toluene	ND	0.050		mg/Kg	1	8/16/2017 11:08:03 AM	33368
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2017 11:08:03 AM	33368
Xylenes, Total	ND	0.10		mg/Kg	1	8/16/2017 11:08:03 AM	33368
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	1	8/16/2017 11:08:03 AM	33368

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708798**

21-Aug-17

Client: Animas Environmental Services
Project: BMG Homestead Ranch 2

Sample ID **MB-33400**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **33400**	RunNo: **45011**
Prep Date: **8/16/2017**	Analysis Date: **8/17/2017**	SeqNo: **1424371** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		90.7	70	130			

Sample ID **LCS-33400**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **33400**	RunNo: **45011**
Prep Date: **8/16/2017**	Analysis Date: **8/17/2017**	SeqNo: **1424372** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.2	73.2	114			
Surr: DNOP	4.6		5.000		91.2	70	130			

Sample ID **1708798-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB-1 @ 5'**	Batch ID: **33400**	RunNo: **45011**
Prep Date: **8/16/2017**	Analysis Date: **8/17/2017**	SeqNo: **1425931** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	9.2	45.83	134.1	77.5	55.8	122			
Surr: DNOP	4.4		4.583		96.6	70	130			

Sample ID **1708798-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB-1 @ 5'**	Batch ID: **33400**	RunNo: **45011**
Prep Date: **8/16/2017**	Analysis Date: **8/17/2017**	SeqNo: **1425932** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.3	46.43	134.1	28.3	55.8	122	14.1	20	S
Surr: DNOP	4.5		4.643		98.0	70	130	0	0	

Sample ID **LCS-33442**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **33442**	RunNo: **45040**
Prep Date: **8/18/2017**	Analysis Date: **8/18/2017**	SeqNo: **1426068** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.4	70	130			

Sample ID **MB-33442**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **33442**	RunNo: **45040**
Prep Date: **8/18/2017**	Analysis Date: **8/18/2017**	SeqNo: **1426069** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708798**

21-Aug-17

Client: Animas Environmental Services

Project: BMG Homestead Ranch 2

Sample ID	**MB-33442**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**
Client ID:	**PBS**	Batch ID:	**33442**	RunNo:	**45040**
Prep Date:	**8/18/2017**	Analysis Date:	**8/18/2017**	SeqNo:	**1426069** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708798**

21-Aug-17

Client: Animas Environmental Services

Project: BMG Homestead Ranch 2

Sample ID **MB-33368**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **33368**	RunNo: **44983**
Prep Date: **8/15/2017**	Analysis Date: **8/16/2017**	SeqNo: **1423807** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	810		1000		80.9	54	150			

Sample ID **LCS-33368**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **33368**	RunNo: **44983**
Prep Date: **8/15/2017**	Analysis Date: **8/16/2017**	SeqNo: **1423808** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.2	76.4	125			
Surr: BFB	900		1000		90.4	54	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1708798**

21-Aug-17

Client: Animas Environmental Services
Project: BMG Homestead Ranch 2

Sample ID **MB-33368**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **33368**	RunNo: **44983**
Prep Date: **8/15/2017**	Analysis Date: **8/16/2017**	SeqNo: **1423831** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	66.6	132			

Sample ID **LCS-33368**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **33368**	RunNo: **44983**
Prep Date: **8/15/2017**	Analysis Date: **8/16/2017**	SeqNo: **1423832** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	66.6	132			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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: Animas Environmental Work Order Number: 1708798 RcptNo: 1

Received By: Andy Freeman 8/12/2017 10:05:00 AM

Completed By: Ashley Gallegos 8/13/2017 4:11:52 PM

Reviewed By: SPE 08/15/17

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?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature 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) 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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
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 ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Turn-Around Time: X Standard ☐ Rush

Project Name: BMG Homestead Ranch #2

Project #:

Mailing Address: 604 W Pinon St.
Farmington, NM 87401

Phone #: 505-564-2281

Email or Fax#: rflegal@animasenvironmental.com

Project Manager: R. Flegal

QA/QC Package: X Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other

☐ EDD (Type)

Sampler: CL

On Ice: X Yes ☐ No

Sample Temperature: 4.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1708798	BTEX - 8021B	TPH (GRO/DRO/MRO) - 8015	Air Bubbles (Y or N)
8/10/17	9:00	SOIL	SB-1 @ 5'	2 - 4 oz jars	Cool	-001	X	X	
8/10/17	9:24	SOIL	SB-1 @ 20'	2 - 4 oz jars	Cool	-002	X	X	
8/10/17	9:32	SOIL	SB-1 @ 25'	2 - 4 oz jars	Cool	-003	X	X	

Analysis Request

Date	Time	Relinquished by	Received by	Date	Time
8/11/17	1419			8/11/17	1419
8/11/17	1917			8/12/17	805

Remarks: Bill to AES

Please call with any questions

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.