UIC – I - 5

ANNUAL REPORT

2018

Annual Class I Well Report for 2019

March 29th, 2019

Agua Moss, LLC

PO Box 600

Farmington, NM 87499

Permit UICI-005

API 30-045-28653

Submitted By:

Philana Thompson

Regulatory Compliance Specialist

Merrion Oil & Gas

610 Reilly Ave

Farmington, NM 87401

505-486-1171 cell

pthompson@merrion.bz

Summary of Operations

1/17/2018 Well was shut in because of annular pressure. Approval received from OCD to plug and test tubing.

3/19/2018 Tubing Repair

6/21/2018 NOI submitted to perform remedial work, perform a temperature survey and additional verification of mechanical integrity.

The annual MIT was performed 10/3/2018 and Bradenhead test was performed 4/3/2018. The Fall off Test was performed 10/2018, next Fall off test to be performed June 2019.

Monitor Well Drilled and completed 3/1/2019

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
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-103
Revised July 18, 2013

WELL API NO.
30-045-28653

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Sunco Disposal

1. Type of Well: Oil Well ☐ Gas Well ☒ Other UIC Class I UICI-5

8. Well Number 1

2. Name of Operator
Agua Moss, LLC

9. OGRID Number
247130

3. Address of Operator
PO Box 600 Farmington, NM 87499

10. Pool name or Wildcat
SWD-MV

4. Well Location
Unit Letter E : 1595 feet from the N line and 1005 feet from the W line
Section 2 Township 29N Range 12W NMPM San Juan County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
5859' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☒	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:			☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Agua Moss, LLC proposes to perform a tubing repair of the above mentioned well. Please see the attached procedure.

* Ensure MIT is in compliance with 19.15.26.11.A(1)

NMOCD
MAR 12 2018
DISTRICT III

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [signature] TITLE Regulatory Compliance DATE 3/12/2018

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-486-1171

For State Use Only

APPROVED BY: [signature] TITLE DATE 3/13/18

Conditions of Approval (if any):

PV

4

AGUA MOSS, LLC

WORKOVER PROCEDURE

Well Information			
Well:	**Sunco Disposal 1**	**Field:**	Mesaverde SWD
Location:	1595' fnl &1005' fwl S2, T29N, R12W San Juan Co. New Mexico	**Elevations:**	5859' GL 5872' RKB
		Depths:	4706' KB PBTD 4760' KB TD
Supervisor:	Ryan Merrion (303.653.2231) Jeff Davis (505.330.1617)	**Engineer:**	J. Ryan Davis (505.215.3292)
API:	30-045-28653	**Date:**	3/8/2018
Surface Casing:	8- 5/8" @ 209' KB w/ 150sx; Circ to surface	**Production Casing:**	5-1/2" @ 4750' KB w/ 230 sx stage 1, 515 sx stage 2, circ 25 sx to surf, DV tool @ 2244' KB
Tubulars:	2- 7/8" 6.5# EUE (Apoxy Coated) @ 4282' KB	**Packer:**	Arrow XL-W retrievable seal bore @ 4282' KB.
Perforations (MV)	4350-4460' KB 2 spf (2000 gals 15% HCL, Frac'd w/ 100,000# 20/40		

Version 2 – Procedure subject to change based on actual well conditions encountered.

Workover Purpose: Repair Tubing Leak

Prior to MIRU

1. Hold pre-job meeting to go over the workover plan to ensure there are no issues. Adjust plan as necessary based upon the meeting review.
2. Manifold csg to flow back tank.
3. Contact rig company to ensure new rubbers installed on BOP and tested to 3,500 psig
4. Note: 1.78" Tubing plug currently set at 4,289' KB in 2-3/8" tail jt F-nipple.

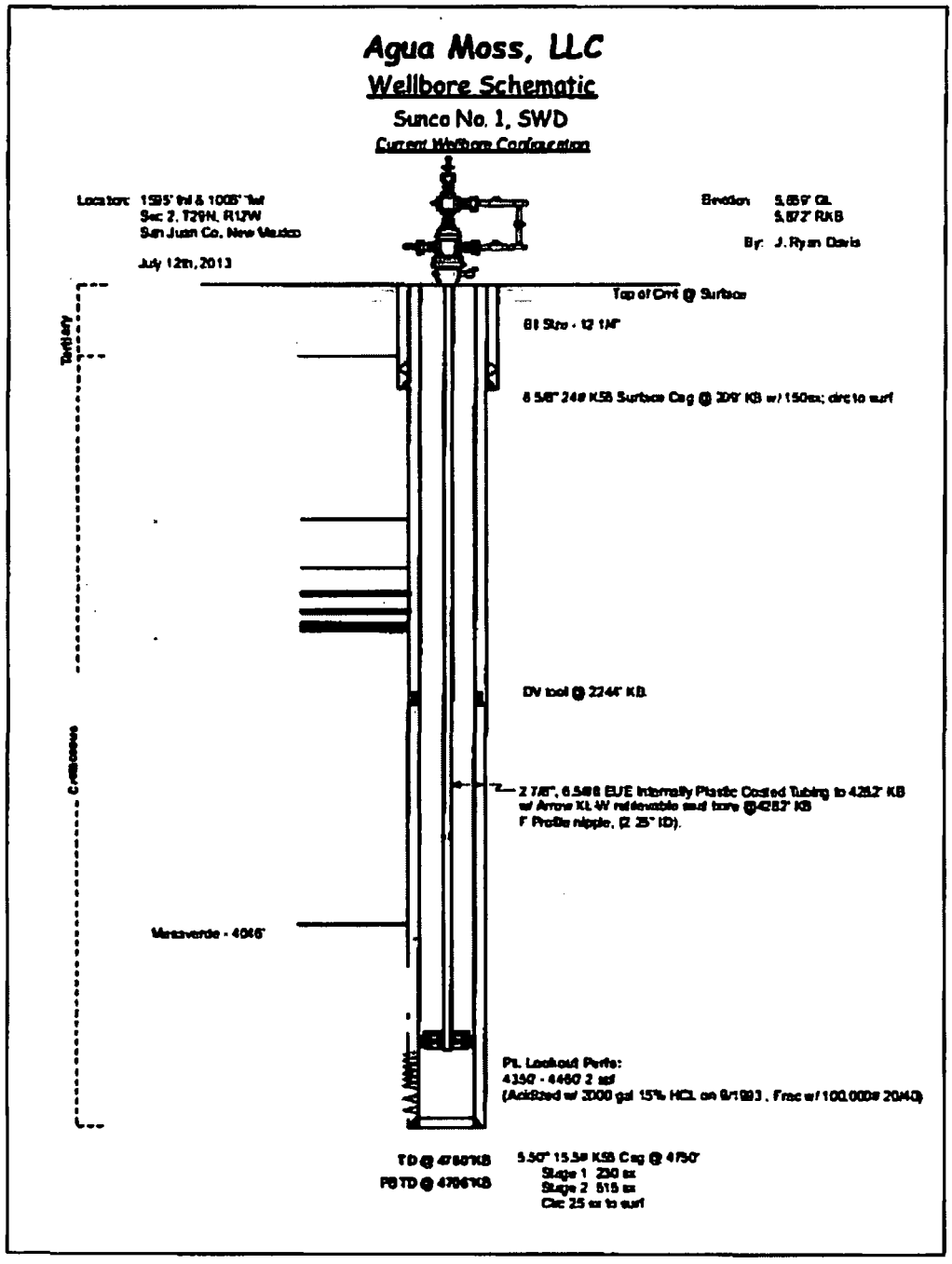
Set Circulating Plug in TBG

5. RU slickline.
6. RIH and set 1.87" circulating plug in F nipple @ 4281' KB.
7. Slowly bleed off tbg pressure at surface to ensure tbg is dead.

Round Trip Tubing String

8. MIRU workover rig.
9. Slowly bleed off pressure on csg to flowback tank.
10. ND WH, pull tubing hanger and remove. NU BOP.
11. Drop tubing to neutral point at packer. Release seal assembly by rotating 4 turns to right at packer. (Release on-off tool by rotating ¼ turn to left at packer)
12. If unable to release from seal assembly, set a circulating slip stop plug above the on-off tool, and J-off the on-off tool.
13. TOH with injection string laying down.
14. Remove and redress seal assembly and on-off tool.
15. PU redressed seal assembly and on-off tool. Replace F-nipple w/ 1.875" stainless X-nipple on top of seal assembly. Install 1.875"stainless X-nipple above on-off tool w/ 6' pup joint spacer. Set 1 circulating plug in btm X-nipple.
16. TIH w/ new IPC injection string using a stabbing guided to make connections.

17. Space out injection tubing with plastic lined subs as needed. Place all subs one full joint below surface to facilitate future workovers.
18. Tie back in to packer
19. J –off of on-off tool
20. Monitor casing and tubing pressures
21. Circulate concentrated packer fluid around the annular space.
22. J-on to packer and land tubing with 8000 lbs of tension
23. ND BOP and NU WH.
24. Conduct MIT (Contact NMOCD 24 hrs prior to witness).
    a. If fails test hanger before proceeding
25. RU slickline unit and retrieve tubing plugs at 4272' KB (new 2-7/8" X-nipple) and 4289' KB (2-3/8"). Equalize prior as necessary.
26. Rig down and release pulling unit.
27. Return well to short term injection to ensure no further issues and get rid of some of accumulated fluids at surface if necessary.
28. Make plans for future clean up job (acid/solvent).


Agua Moss, LLC
Wellbore Schematic
Sunco No. 1, SWD
Current Wellbore Configuration
Location: 1595' fnl & 1005' fwl
Sec 2, T29N, R12W
San Juan Co, New Mexico
July 12th, 2013
Elevation: 5,859' GL
5,872' RKB
By: J. Ryan Davis
Top of Cmt @ Surface
8 5/8" 24# K55 Surface Csg @ 209' KB w/ 150sx; circ to surf
DV tool @ 2244' KB
2 7/8", 6.5#/ft EUE Internally Plastic Coated Tubing to 4252' KB
w/ Arrow XL-W retrievable seal bore @4257' KB
1' Profile nipple, (2.25" ID).
Mesaverde - 4046'
Pt. Lookout Perfs:
4350 - 4460' 2 spf
(Acidized w/ 3000 gal 15% HCL on 8/1993. Frac w/ 100,000# 20/40)
TD @ 4769'KB
PBTD @ 4706'KB
5.50" 15.5# K55 Csg @ 4750'
Stage 1: 230 sx
Stage 2: 515 sx
Circ 25 sx to surf

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District IV – (505) 476-3460
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State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO. 30-045-28653	
5. Indicate Type of Lease STATE ☐ FEE ☒	
6. State Oil & Gas Lease No.	
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD Class I	7. Lease Name or Unit Agreement Name Sunco Disposal
	8. Well Number 1
2. Name of Operator Agua Moss, LLC	9. OGRID Number 247130
3. Address of Operator PO Box 600 Farmington, NM 87499	10. Pool name or Wildcat SWD MV
4. Well Location Unit Letter E : 1595 feet from the North line and 1005 feet from the West line Section 2 Township 29N Range 12W NMPM County San Juan	
	11. Elevation (*Show whether DR, RKB, RT, GR, etc.*) 5859' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☒	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:	☐		

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Agua Moss LLC proposes to conduct a temperature survey as an additional verification of mechanical integrity on the Sunco #1. The NMOCD will be notified 24 hrs prior to executing the following procedure:

1. Rig up slickline and retrieve the tubing plug set at 4,278' KB.
2. Rig down slickline
3. Rig up wireline
4. Run a temperature survey down to the Pt. Lookout injection interval and log from 4,460' KB to surface
5. Inject a minimum of 100 bbls down the well until annulus pressure stabilizes indicating temperature stabilization
6. Run another temperature survey from 4,460' KB to surface
7. Rig down wireline
8. Using the results from the temperature surveys, identify any anomalies outside the normal temperature gradient and demonstrate that injection is contained within the Pt. Lookout formation
9. Provide these temperature survey results to the NMOCD.
10. Once test results are verified, return the well to injection

During normal disposal operations, casing pressure will be monitored to verify that the loss of annulus fluid is not occurring. A minimum casing pressure of 100 psig will also be maintained as a precautionary measure. Agua Moss also will perform monthly annulus pressure tests at 1000 psig to verify sustained annulus integrity. Disposal operations will discontinue if there is a substantial variation from the normal casing pressure trend or in the event that casing pressure falls below 100 psig.

Spud Date: | Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [signature] TITLE Regulatory Compliance Specalist DATE 6/14/2018

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-486-1171

For State Use Only

APPROVED BY: Carl J. Chavez TITLE Environmental Engineer DATE 6/21/2018

Conditions of Approval (if any):

- provide temperature survey results to OCD-SF with operator's conclusion(s) and any recommendations based on survey results for OCD-SF approval, approval w/ conditions or disapproval.

Submit 1 Copy To Appropriate District Office
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Form C-103
Revised July 18, 2013

	WELL API NO. 30-045-28653
	5. Indicate Type of Lease STATE ☐ FEE ☒
	6. State Oil & Gas Lease No.
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	8. Well Number #1
2. Name of Operator Agua Moss, LLC	9. OGRID Number 247130
3. Address of Operator PO Box 600 Farmington, NM 87499	10. Pool name or Wildcat SWD-MV
4. Well Location Unit Letter E : 1595 feet from the North line and 1005 feet from the West line Section 2 Township 29N Range 12W NMPM County San Juan	
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TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: Acid Job ☒	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Agua Moss, LLC performed an acid job on 9/7/2018

Initial Tbg/Csg: 1750 psig / 900 psig. RU H&M treating truck to the tbg. Pumped 150 gal of P-150, 500 gal of 15% HCl and flushed w/ 26 bbls of fresh water. Maintained ~2200 psig during injection. Final Tbg/Csg: 1800 psig / 500 psig. RD H&M truck. Let acid sit overnight.

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE TITLE Regulatory Compliance Specialist DATE 9/6/2018

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-486-1171

For State Use Only

MERRION OIL & GAS

Philana Thompson <pthompson@merrion.bz>

Re: Acid Job on the Sunco Disposal #1

2 messages

Ryan Merrion <ryan@merrion.bz> Fri, Sep 14, 2018 at 4:15 PM
To: Philana Thompson <pthompson@merrion.bz>
Cc: Ryan Davis <rdavis@merrion.bz>

Jeff would have the slickline report post acid job, you'd have to get that from him.

On Fri, Sep 14, 2018 at 4:05 PM Philana Thompson <pthompson@merrion.bz> wrote:
so on 9/8 did H&M come back to the Sunco and suck out the Acid?? lol I am filling out the subsq.

On Mon, Sep 10, 2018 at 8:27 AM, Ryan Merrion <ryan@merrion.bz> wrote:
Sunco #1 09/07/2018

Initial Tbg/Csg: 1750 psig / 900 psig. RU H&M treating truck to the tbg. Pumped 150 gal of P-150, 500 gal of 15% HCl and flushed w/ 26 bbls of fresh water. Maintained ~2200 psig during injection. Final Tbg/Csg: 1800 psig / 500 psig. RD H&M truck. Let acid sit overnight.

Ryan Merrion
Production Engineer
MERRION OIL & GAS
ryan@merrion.bz
(303) 653-2231

On Fri, Sep 7, 2018 at 4:42 PM, Ryan Merrion <ryan@merrion.bz> wrote:
Acid away.

On Thu, Sep 6, 2018 at 5:51 PM Philana Thompson <pthompson@merrion.bz> wrote:
I had to go coach soccer I will run back to Office after and get this and the c138 taken care of

Philana Thompson
Merrion Oil & Gas
Sent from my iPhone

On Sep 6, 2018, at 5:43 PM, Ryan Davis <rdavis@merrion.bz> wrote:

Ryan Davis
Operations Manager
MERRION OIL & GAS

(W) 505-215-3292

March 8, 2019

State of NM
Office of the State Engineer
100 Gossett Drive, Suite A
Aztec, NM 87410

Re: Monitor Well, SJ-4323 POD1, Sunco Disposal Well Groundwater Monitoring

Lat: 36.758081
Long: -108.073714

Water table measurements were completed 24 hours after coming into contact w/ ground water. No artesian conditions were encountered

The drilling report and well bore diagram is attached.

For any questions or concerns please contact me at 505-486-1171 or by email pthompson@merrion.bz

Thank you,

Philana Thompson
Regulatory Compliance Specialist

cc:
Carl Chavez, NMOCD Santa Fe, via email, carlj.chavez@state.nm.us
Brandon Powell, NMOCD District 3, via email, Brandon.Powell@state.nm.us
Vanessa Fields, NMOCD District 3, via email, Vanessa.Fields@state.nm.us

Mote Drilling, Inc
Monitor well report
Sunco Disposal
SJ-4323 POD1

2/27/2019
MIRU Mote Rig 207
Drill 9 7/8 0-40 wait on more 8 5/8
Wait on conductor
Set conductor
Drill 40-50 with 6 ½ Bit
TOOH
Wait to test for water
Test for water, no water
Drill 50-76 with 6 ½ Bit
TOOH, pull CSG
TIH with 65' of augers

2/28/2019
Drill 76-100 with 6 ¼ Bit
Wait 1 hour
Test for water, hit water
Wait on confirmation

3/1/2019
Mote MIRU, went in with a plum bob and tagged TD @98'.

Heather with Rule Engineering established water table top @ 83' 3". Water table confirmation was witnessed by Vanessa Fields with the NMOCD Aztec office.

Casing was RIH as follows: 2" SCH 80 PVC End Cap, 20' of 2" SCH 80 PVC 0.02" slotted screen, 80' of 2" SCH 80 PVC casing to surface. Casing was isolated with a 2" standard compression plug. Poured 10/20 mesh silica sand and tagged top of filter pack 2' above slotted screen. Poured 3' of 1/4" swellable bentonite pellets w/ water on top of the gravel pack. Filled the remaining casing w/ bentonite grout (30% solids, 10.2 ppg, 2.2 yld). As the grout was pour the augers used to stabilize the hole were removed. Topped well off w/ a 3' x 3' x 4" concrete pad. RDMOL w/ Mote.

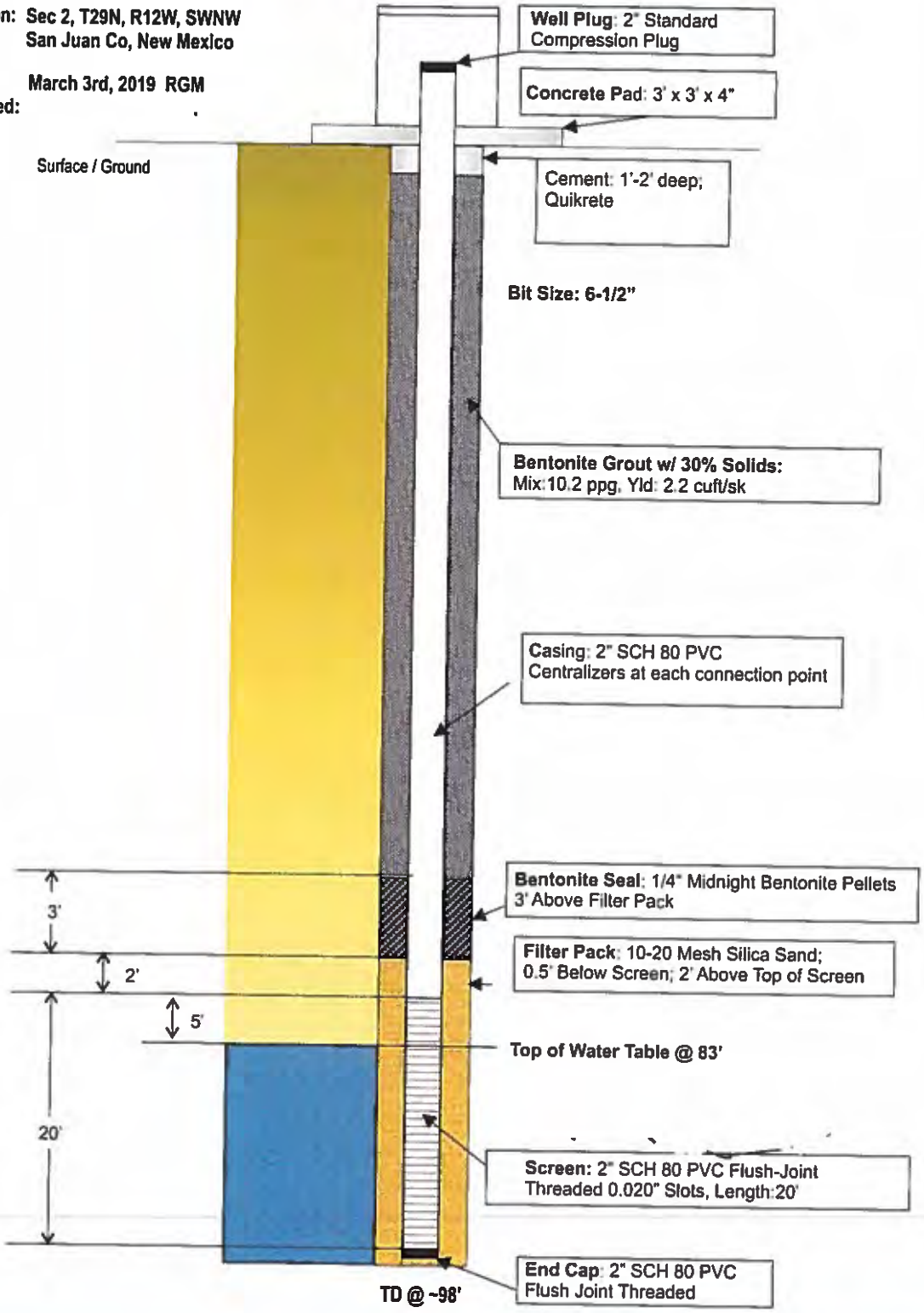
Agua Moss LLC.
Wellbore Schematic
Sunco #1 Monitoring Well
Current Wellbore Configuration

Location: Sec 2, T29N, R12W, SWNW
San Juan Co, New Mexico

Date: March 3rd, 2019 RGM
Modified:

Elevation: 5,859' GL

By: RGM



NMOSE Permit to Drill a Well(s) With No Water Right - Conditions of Approval
SJ-4323 POD1

The New Mexico Office of the State Engineer (NMOSE) has determined that existing water rights will not be impaired by this activity. This application is approved without publication provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state. This application approval (i.e., permit) is further subject to the following conditions of approval.

1. This permit is approved as follows:

Permittee(s):	Agua Moss, LLC 610 Reilly Avenue Farmington, NM 87401
Permit Number:	SJ-4323
Application File Date:	October 29, 2018
Priority:	N/A
Source:	Groundwater
Point(s) of Diversion:	One point of diversion (POD), SJ-4323 POD1, is proposed. The POD consists of a single proposed monitoring well (Table 1) that will be used for periodic groundwater sampling. The well will be located at the Sunco #1 Disposal Well facility on land owned by Agua Moss, LLC, near the intersection of Road 3500 and Road 3773 near Flora Vista, San Juan County, New Mexico. The POD will be located within the SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, at the following approximate point locations (Long/Lat, WGS84).

Table 1: Proposed New Monitoring Wells

POD Number and Owner's Well Name	Casing: Diameter (inches) and Depth (feet)		Longitude (Decimal Degrees)	Latitude (Decimal Degrees)
SJ-4323 POD1 (MW-1)	2	150	108.0734253° W	36.7579498° N

Purpose of Use:	Groundwater sampling
Place of Use:	N/A
Amount of Water:	N/A

2. No water shall be appropriated and beneficially used from any wells or borings approved under this permit.

3. No water shall be diverted from the well(s) except for initial well development and periodic sampling purposes. Upon completion of monitoring activities the well(s) shall be plugged in accordance with 19.27.4 NMAC, unless a permit to use water is acquired from the NMOSE.

4. The well(s) may continue to be used indefinitely for groundwater sampling or monitoring required for the current site investigation and any associated remediation, so long as they remain in good repair. **A new permit shall be obtained from the NMOSE prior to replacing a well(s) or for any change in use as approved herein.**

5. Water well drilling and well drilling activities, including well plugging, are regulated under NMOSE Regulations 19.27.4 NMAC. These regulations apply, and provide both general and specific direction regarding the drilling of wells in New Mexico. Note that the construction of any well that allows groundwater to flow uncontrolled to the land surface or to move appreciably between geologic units is prohibited.

6. In accordance with Subsection A of 19.27.4.29 NMAC, on-site supervision of well drilling/plugging is required by the holder of a New Mexico Well Driller License or a NMOSE-registered Drill Rig Supervisor. The New Mexico licensed Well Driller shall ensure that well drilling activities are completed in accordance with 19.27.4.29, 19.27.4.30 and 19.27.4.31 NMAC. However, pursuant to 72-12-12 NMSA 1978 and 19.27.4.8 NMAC, a driller's license is not required for the construction of a driven well with an outside casing diameter of 2⅞ inches or less and that does not require the use of a drill rig (e.g., auger) for installation. This exemption is not applicable to well plugging.

7. The permittee has not stated whether artesian conditions are likely to be encountered at the proposed well/borehole location(s). However, if artesian conditions are encountered during drilling, all rules and regulations pertaining to the drilling and casing and plugging of artesian wells shall be followed.

8. A Well Record documenting the as-built well construction and materials used shall be filed for each of the new wells in accordance with Subsection N of 19.27.4.29 NMAC. **Well Records shall be filed with the State Engineer (NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410) within 30 days after completion of the well(s).** Well installation(s) shall be complete and the well record(s) filed no later than one year from the date of approval of this permit.

9. If the required Well Record documentation is not received within one year of the date of permit approval, this permit will automatically expire.

10. When the permittee receives approval or direction to permanently abandon the well(s)/borehole(s) covered by this permit, plugging shall be performed by a New Mexico licensed well driller. The well(s)/borehole(s) shall be plugged pursuant to Subsection C of 19.27.4.30 NMAC using the following method, unless an alternate plugging method has been proposed by or on behalf of the well owner and approved by the NMOSE. If a well/borehole has encountered artesian conditions, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities concerning artesian wells. Additionally, if the following standardized plugging sealant is not appropriate for use due to incompatibility with the water quality or any soil and water contaminates encountered, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities.

a. Obstructions in a well/borehole shall be identified and removed if possible. If an obstruction cannot be removed, the method used to grout below and around the obstruction shall be described in detail in the plugging record.

b. Prior to plugging, calculate the theoretical volume of sealant needed for abandonment of the well/borehole based on the actual measured pluggable depth of the well/borehole and the volume factor for the casing/borehole diameter. Compare the actual volume of sealant placed in the well/borehole with the theoretical volume to verify the actual volume of sealant is equal to or exceeds the theoretical volume.

c. Portland Type I/II cement shall be used for the plugging sealant. The water mixed with the cement to create the plugging sealant shall be potable water or of similar quality. Portland cement has a fundamental water demand of 5.2 gallons of water per 94-lb sack of cement. Up to a maximum of 6.0 gallons per 94-lb sack is acceptable to allow for greater pumpability.

Pure bentonite powder ("90 barrel yield") is allowed as a cement additive by NMOSE and American Water Works Association (AWWA) guidelines. If a bentonite additive is used, the following rates and mixing guidelines shall be followed. For a rate or a mixing procedure other than that provided below, the NMOSE District V office must be contacted for pre-approval. Neither granular bentonite nor extended-yield bentonite shall be mixed with cement for the purpose of this plugging activity. When supplementing a cement slurry with bentonite powder, water demand for the mix increases at a rate of approximately 0.65 gallon of water for each 1% increment of bentonite bdwc (by dry weight cement) above the stated base water demand of 5.2 gallons water per 94-lb sack of cement for neat cement. Bentonite powder must be hydrated separately with its required increment of water before being mixed into the wet neat cement. If water is otherwise added to the combination of dry ingredients or the dry bentonite is blended into wet cement, the alkalinity of the cement will restrict the yield of the bentonite powder, resulting in excess free water in the slurry and excessive cement shrinkage upon curing.

d. Placement of the sealant within the well/borehole shall be by pumping through a tremie pipe extended to near the bottom of the well/borehole and kept below the top of the slurry column (i.e., immersed in the slurry) as the well/borehole is plugged from bottom upwards in a manner that displaces the standing water column.

e. Prior to, or upon completion of plugging, the well casing may be cut-off below grade as necessary to allow for approved construction onsite, provided a minimum six-inch thickness of reinforced abandonment plugging sealant or concrete completely covers the top of the cut-off casing. Any remaining void to the surface may be filled with native soil, concrete, or asphalt as needed to match the surrounding surface material and blended with the surface topography to prevent ponding.

f. **Within 30 days after completion of well/borehole plugging, a complete Plugging Record shall be filed with the State Engineer** in accordance with Paragraph (3) of Subsection C of 19.27.4.30 NMAC for each well/boring plugged. The Well Plugging Record(s) shall be filed with the State Engineer at the NMOSE District V Office, 100 Gossett Drive, Suite A, Aztec, NM 87410. The required well plugging record form is available at http://www.ose.state.nm.us/STST/wdForms.php.

11. In accordance with Subsection C of 19.27.4.30 NMAC, a well/borehole that does not encounter groundwater may be immediately plugged by filling with drill cuttings or clean native fill to

within 10 feet of land surface and by plugging the remaining 10 feet to the land surface with a sealant approved by the Office of the State Engineer. A Plugging Record shall be filed with the State Engineer as described above.

12. Should another regulatory agency sharing jurisdiction of the project authorize, or by regulation require, more stringent requirements than stated herein, the more stringent procedure should be followed. These, among others, may include provisions regarding pre-authorization to proceed, type of methods and materials used, inspection, or prohibition of free discharge of any fluid or other material to or from the well that is related to the drilling and/or monitoring process.

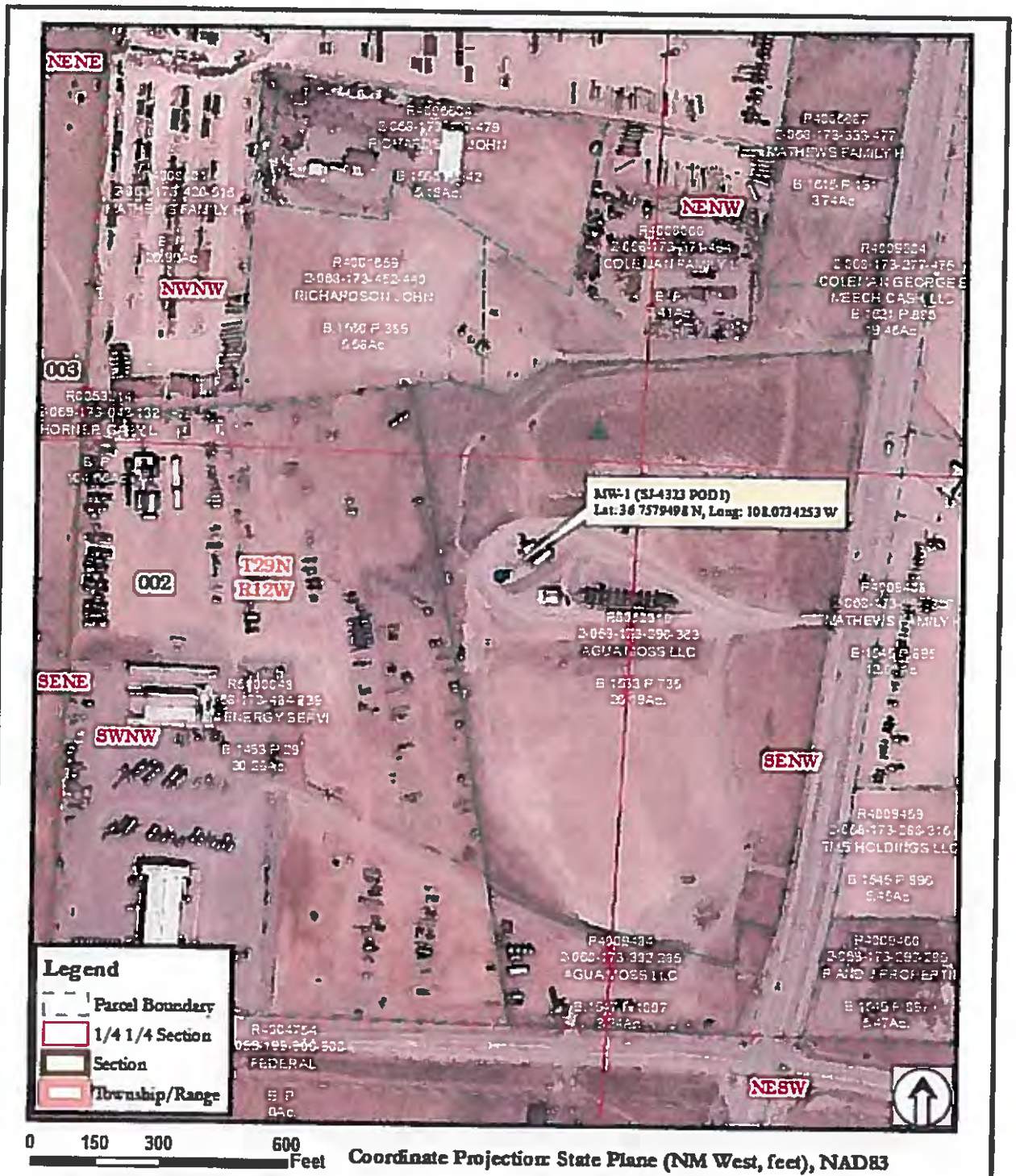
13. Pursuant to 72-12-3 NMSA 1978, the applicant may or may not have provided written documentation with the application, which the applicant claims as confirmation that access has been granted for the aforementioned well(s) to be located on property owned by someone other than the well owner/applicant. NMOSE approval of this permit in no way infers the right of access to land not owned by the well owner/applicant.

14. The State Engineer retains jurisdiction of this permit.

The application for drilling well(s) SJ-4323 POD1 without a water right, submitted on November 27, 2018, is hereby approved with the aforesaid conditions applied, when signed by an authorized designee of the State Engineer:

Witness my hand and seal this 28th day of November, A.D. 2018.
Tom Blaine, P.E., State Engineer

By: Blaine Watson
Blaine Watson, Manager
District V Office, Water Rights Division



Map Description: Aqua Moss, LLC, Sunco #1 Disposal Well
GW Monitoring Well
Data sources: Application materials
File number: SJ-4323
Aerial Photography: 2017

STATE OF NEW MEXICO
Office of the State Engineer
Tom Blaine, P.E.
State Engineer

District V Office, Aztec
Well Location Map

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
AZTEC

Tom Blaine, P.E.
State Engineer

100 Gossett Drive, Suite A
Aztec, New Mexico 87410

November 28, 2018

Agua Moss, LLC
Attn: Philana Thompson
610 Reilly Avenue
Farmington, NM 87401

RE: Permit Approval for Monitoring Well, SJ-4323 POD1; Sunco #1 Disposal Well Groundwater Monitoring; Flora Vista, San Juan County, New Mexico

Dear Ms. Thompson:

On October 29, 2018, as revised November 27, 2018, the New Mexico Office of the State Engineer received an application for a permit for the drilling and use of one proposed new monitoring well at the above referenced location. Enclosed is a copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page and in the attached Conditions of Approval. A receipt for the fees paid is also attached.

Please be aware that there are deadlines to submit a well record for the newly installed monitoring well. These deadlines can be found in the attached Conditions of Approval. A standardized plugging method has also been included in the Conditions of Approval for the future abandonment of the well covered by this permit. This eliminates the need to submit a separate Well Plugging Plan of Operations for approval by the NMOSE prior to plugging, unless an alternate plugging method is proposed, required by a separate oversight agency, necessary due to incompatibility with actual conditions, or artesian conditions are encountered. The well and plugging records should be sent to the NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410.

If you have any questions regarding this permitting action, please feel free to contact me at (505) 334-4571.

Sincerely,

Blaine Watson
District Manager
Water Rights Division – District V



Enclosures

cc: Aztec Reading (w/o enclosures)
SJ-4323 File
WATERS
Brandon Powell, NMOCD District 3, via email: brandon.powell@state.nm.us

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION – SANTA FE OFFICE

OFFICIAL RECEIPT NUMBER: 6 - 43925 DATE: 10/26/2018 FILE NO.: TBD

TOTAL: 5.00 RECEIVED: five dollars & cc/100 DOLLARS CHECK NO.: 52832 CASH: _____

PAYOR: Merrion Oil & Gas - c/o Aqua Moss, LLC - Phillana Thompson ADDRESS: 610 Reilly Ave CITY: Farmington STATE: NM

ZIP: 87401 RECEIVED BY: _____

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. **Original** to payor; **pink** copy to Program Support/ASD; and **yellow** copy for Water Rights. If a mistake is made, void the original and all copies and submit to Program Support/ASD as part of your daily deposit.

A. Ground Water Filing Fees

___	1. Change of Ownership of Water Right	$ 2.00
___	2. Application to Appropriate or Supplement Domestic 72-12-1 Well	$ 125.00
___	3. Application to Repair or Deepen 72-12-1 Well	$ 75.00
___	4. Application for Replacement 72-12-1 Well	$ 75.00
___	5. Application to Change Purpose of Use 72-12-1 Well	$ 75.00
___	6. Application for Stock Well	$ 5.00
___	7. Application to Appropriate Irrigation, Municipal, or Commercial Use	$ 25.00
___	8. Declaration of Water Right	$ 1.00
___	9. Application for Supplemental Non 72-12-1 Well	$ 25.00
___	10. Application to Change Place or Purpose of Use Non 72-12-1 Well	$ 25.00
___	11. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Ground Water	$ 50.00
___	12. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water	$ 50.00
___	13. Application to Change Point of Diversion of Non 72-12-1 Well	$ 25.00
___	14. Application to Repair or Deepen Non 72-12-1 Well	$ 5.00
1	15. Application for Test, Expl. Observ. Well	$ 5.00
___	16. Application for Extension of Time	$ 25.00
___	17. Proof of Application to Beneficial Use	$ 25.00
___	18. Notice of Intent to Appropriate	$ 25.00

B. Surface Water Filing Fees

___	1. Change of Ownership of a Water Right	$ 5.00
___	2. Declaration of Water Right	$ 10.00
___	3. Amended Declaration	$ 25.00
___	4. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Surface Water	$ 200.00
___	5. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Surface Water	$ 200.00
___	6. Application to Change Point of Diversion	$ 100.00
___	7. Application to Change Place and/or Purpose of Use	$ 100.00
___	8. Application to Appropriate	$ 25.00
___	9. Notice of Intent to Appropriate	$ 25.00
___	10. Application for Extension of Time	$ 50.00
___	11. Supplemental Well to a Surface Right	$ 100.00
___	12. Return Flow Credit	$ 100.00
___	13. Proof of Completion of Works	$ 25.00
___	14. Proof of Application of Water to Beneficial Use	$ 25.00
___	15. Water Development Plan	$ 100.00
___	16. Declaration of Livestock Water Impoundment	$ 10.00
___	17. Application for Livestock Water Impoundment	$ 10.00

C. Well Driller Fees

___	1. Application for Well Driller's License	$ 50.00
___	2. Application for Renewal of Well Driller's License	$ 50.00
___	3. Application to Amend Well Driller's License	$ 50.00

D. Reproduction of Documents

___ @ 0.25¢ $_____

___ Map(s) $_____

E. Certification $_____

F. Other $_____

G. Comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

All fees are non-refundable.

File No. SJ-4323 POD1

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

2018 NOV 27 PM 3:24
AZTEC, NEW MEXICO

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☐ Other(Describe):
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 1/1/2019 Requested End Date: Uknown

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Agua Moss, LLC	Name:
Contact or Agent: Philana Thompson — check here if Agent ☐	Contact or Agent: — check here if Agent ☐
Mailing Address: 610 Reilly Ave	Mailing Address:
City: Farmington	City:
State: NM — Zip Code: 87401	State: — Zip Code:
Phone: 505-486-1171 — ☐ Home ☒ Cell Phone (Work):	Phone: — ☐ Home ☐ Cell Phone (Work):
E-mail (optional): pthompson@merrion.bz	E-mail (optional):

FOR OSE INTERNAL USE — Application for Permit, Form WR-07, Rev 11/17/16

File No.: SJ-4323 POD1	Trn. No.:	Receipt No.: 6-43925
Trans Description (optional):		
Sub-Basin:	PCW/LOG Due Date: 11/28/2019	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
Sunco Disposal #1	-108.0734253	36.7579498	SW/4 NW/4, Sec 2, T29N, R12W
(SJ-4323 POD1)			

OIL CONSERVATION DIVISION
AZTEC, NEW MEXICO
2018 NOV 27 PM 3:24

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
located approximately 6 miles southwest of Aztec at the intersection of CR-3500 and CR-3773.

Well is on land owned by: Agua Moss, LLC

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 150'	Outside diameter of well casing (inches): 2"
Driller Name: Craig Mobley- Mo-Te Drilling	Driller License Number: WD733

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Monitor well will be air drilled terminating at the shallowest interval where groundwater is encountered. Screen will be set ~10' below the ground water top. Typical Intervals used 50 ft and 100 FT.

Wait 1 Hour after reaching each depth prior to running down hole with conductivity probe. If water is encountered, leave hole open for 24 hours to allow water level to stabilize and re-measure.

Specific Requirements: This monitor well is being drilled as required by the NMOCD permit UICI-5. The monitor well will remain as long as the Injection well Sunco Disposal #1 (30-045-28653) is active.

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Philana Thompson
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature

Applicant Signature

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO
2018 NOV 27 P 1 3: 24

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 28th day of November 20 18, for the State Engineer,

Tom Blaine, P.E., State Engineer

By: Blaine Watson
Signature

Blaine Watson
Print

Title: District V Manager
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: SJ-4323 POD1 | Trn No.:

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO

2018 NOV 27 PM 3:26

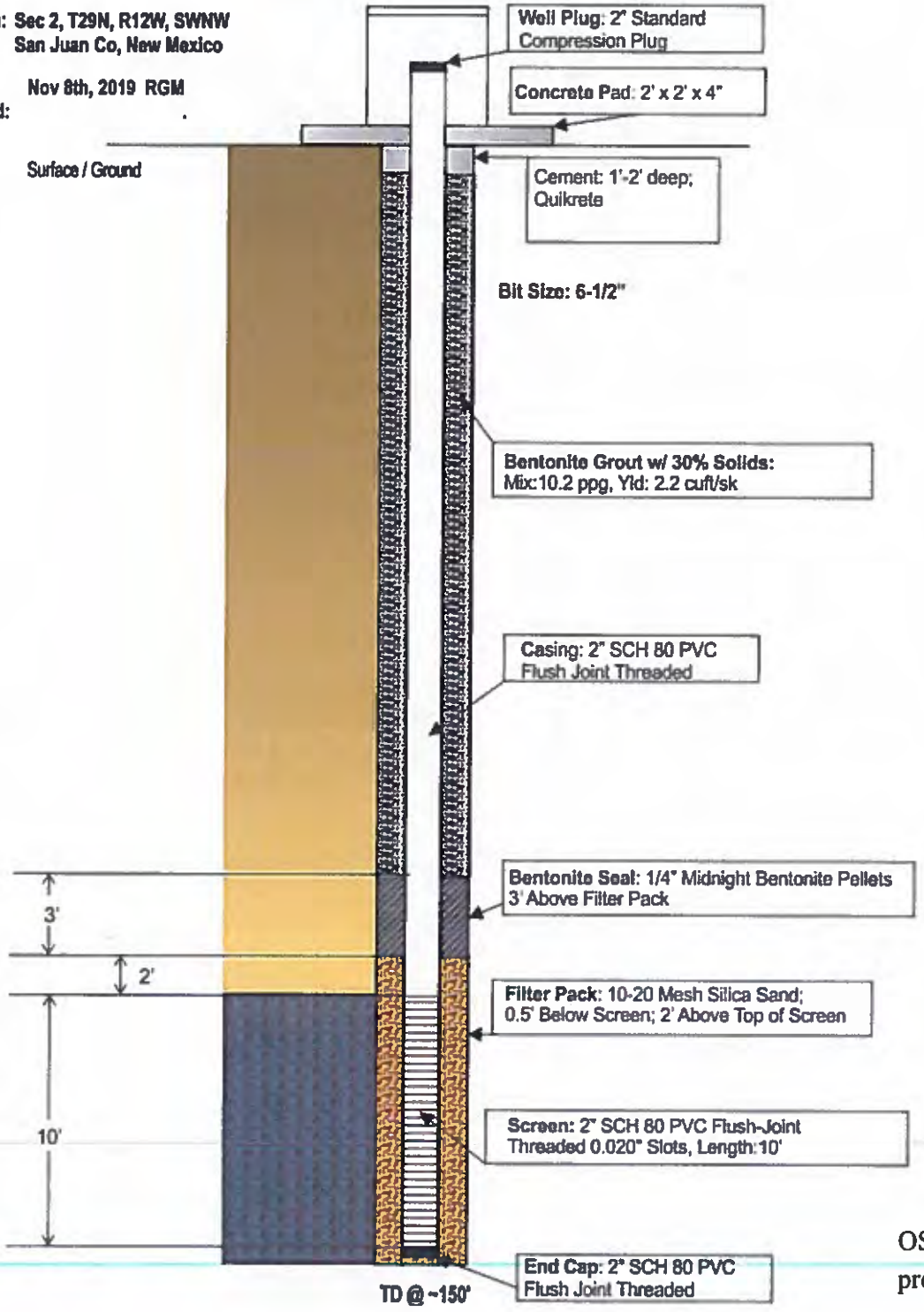
Agua Moss LLC.
Wellbore Schematic
Sunco #1 Monitoring Well
Current Wellbore Configuration

Location: Sec 2, T29N, R12W, SWNW
San Juan Co, New Mexico

Date: Nov 8th, 2019 RGM
Modified:

Elevation: 5,859' GL

By: RGM



OSE File #: SJ-4323 POD1
proposed well schematic

NMOSE Permit to Drill a Well(s) With No Water Right - Conditions of Approval
SJ-4323 POD1

The New Mexico Office of the State Engineer (NMOSE) has determined that existing water rights will not be impaired by this activity. This application is approved without publication provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state. This application approval (i.e., permit) is further subject to the following conditions of approval.

1. This permit is approved as follows:

Permittee(s):	Agua Moss, LLC 610 Reilly Avenue Farmington, NM 87401
Permit Number:	SJ-4323
Application File Date:	October 29, 2018
Priority:	N/A
Source:	Groundwater
Point(s) of Diversion:	One point of diversion (POD), SJ-4323 POD1, is proposed. The POD consists of a single proposed monitoring well (Table 1) that will be used for periodic groundwater sampling. The well will be located at the Sunco #1 Disposal Well facility on land owned by Agua Moss, LLC, near the intersection of Road 3500 and Road 3773 near Flora Vista, San Juan County, New Mexico. The POD will be located within the SW/4 NW/4 of Section 2, Township 29 North, Range 12 West, NMPM, at the following approximate point locations (Long/Lat, WGS84).

Table 1: Proposed New Monitoring Wells

POD Number and Owner's Well Name	Casing: Diameter (inches) and Depth (feet)		Longitude (Decimal Degrees)	Latitude (Decimal Degrees)
SJ-4323 POD1 (MW-1)	2	150	108.0734253° W	36.7579498° N

Purpose of Use:	Groundwater sampling
Place of Use:	N/A
Amount of Water:	N/A

2. No water shall be appropriated and beneficially used from any wells or borings approved under this permit.

3. No water shall be diverted from the well(s) except for initial well development and periodic sampling purposes. Upon completion of monitoring activities the well(s) shall be plugged in accordance with 19.27.4 NMAC, unless a permit to use water is acquired from the NMOSE.

a. Obstructions in a well/borehole shall be identified and removed if possible. If an obstruction cannot be removed, the method used to grout below and around the obstruction shall be described in detail in the plugging record.

b. Prior to plugging, calculate the theoretical volume of sealant needed for abandonment of the well/borehole based on the actual measured pluggable depth of the well/borehole and the volume factor for the casing/borehole diameter. Compare the actual volume of sealant placed in the well/borehole with the theoretical volume to verify the actual volume of sealant is equal to or exceeds the theoretical volume.

c. Portland Type I/II cement shall be used for the plugging sealant. The water mixed with the cement to create the plugging sealant shall be potable water or of similar quality. Portland cement has a fundamental water demand of 5.2 gallons of water per 94-lb sack of cement. Up to a maximum of 6.0 gallons per 94-lb sack is acceptable to allow for greater pumpability.

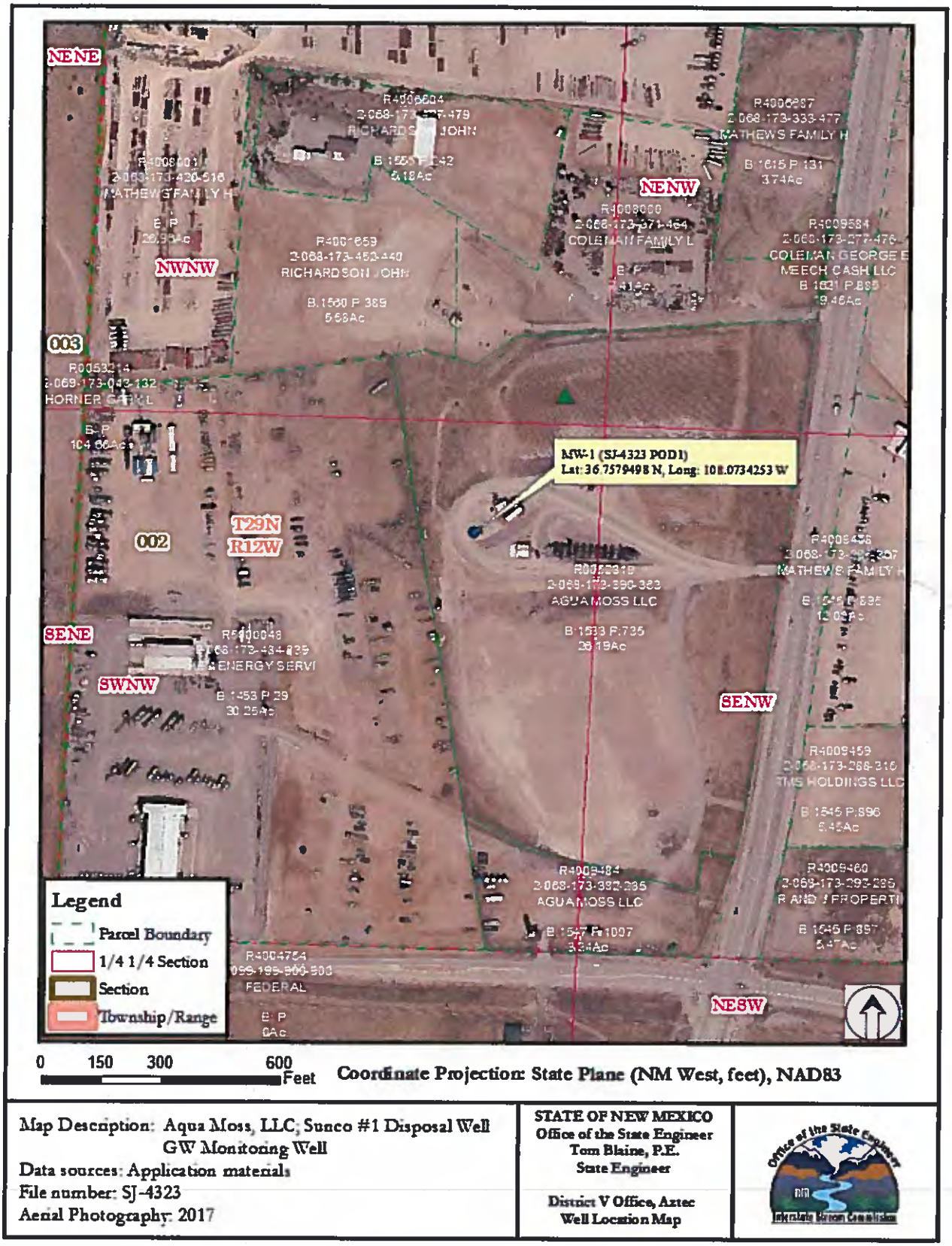
   Pure bentonite powder ("90 barrel yield") is allowed as a cement additive by NMOSE and American Water Works Association (AWWA) guidelines. If a bentonite additive is used, the following rates and mixing guidelines shall be followed. For a rate or a mixing procedure other than that provided below, the NMOSE District V office must be contacted for pre-approval. Neither granular bentonite nor extended-yield bentonite shall be mixed with cement for the purpose of this plugging activity. When supplementing a cement slurry with bentonite powder, water demand for the mix increases at a rate of approximately 0.65 gallon of water for each 1% increment of bentonite bdwc (by dry weight cement) above the stated base water demand of 5.2 gallons water per 94-lb sack of cement for neat cement. Bentonite powder must be hydrated separately with its required increment of water before being mixed into the wet neat cement. If water is otherwise added to the combination of dry ingredients or the dry bentonite is blended into wet cement, the alkalinity of the cement will restrict the yield of the bentonite powder, resulting in excess free water in the slurry and excessive cement shrinkage upon curing.

d. Placement of the sealant within the well/borehole shall be by pumping through a tremie pipe extended to near the bottom of the well/borehole and kept below the top of the slurry column (i.e., immersed in the slurry) as the well/borehole is plugged from bottom upwards in a manner that displaces the standing water column.

e. Prior to, or upon completion of plugging, the well casing may be cut-off below grade as necessary to allow for approved construction onsite, provided a minimum six-inch thickness of reinforced abandonment plugging sealant or concrete completely covers the top of the cut-off casing. Any remaining void to the surface may be filled with native soil, concrete, or asphalt as needed to match the surrounding surface material and blended with the surface topography to prevent ponding.

f. **Within 30 days after completion of well/borehole plugging, a complete Plugging Record shall be filed with the State Engineer** in accordance with Paragraph (3) of Subsection C of 19.27.4.30 NMAC for each well/boring plugged. The Well Plugging Record(s) shall be filed with the State Engineer at the NMOSE District V Office, 100 Gossett Drive, Suite A, Aztec, NM 87410. The required well plugging record form is available at http://www.ose.state.nm.us/STST/wdForms.php.

11. In accordance with Subsection C of 19.27.4.30 NMAC, a well/borehole that does not encounter groundwater may be immediately plugged by filling with drill cuttings or clean native fill to



Map Description: Aqua Moss, LLC; Sunco #1 Disposal Well
GW Monitoring Well
Data sources: Application materials
File number: SJ-4323
Aerial Photography: 2017

STATE OF NEW MEXICO
Office of the State Engineer
Tom Blaine, P.E.
State Engineer

District V Office, Aztec
Well Location Map

Appendices

Appendix A

Monthly Injection/disposal volumes

MAX and Average injection PSI

Appendix B

Quarterly Chemical Analyses Data

Appendix C

MIT

BH Test

FOT

Temp Log

Appendix D

Charts

C-138s

Appendix E

AOR

Appendix A

UICI-5-0
Agua Moss, LLC
Sunco Disposal #1 30-045-28653

2018

Quarterly
Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maxium Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	Total Cumulative Volume (barrels)	
													Previous year	14891018	
Jan-2018	1720.833	2200	200	13.20520833	19.36666667	3.73333333	0	0	0	452.75	664	128	1811	14892829	
Feb-2018	0	0	0	0	0	0	0	0	0	0	0	0	0	14892829	
Mar-2018	0	0	0	0	0	0	0	0	0	0	0	0	0	14892829	
													Previous Quarter	14892829	
Apr-2018	2183.333	2200	2150	40.04583333	53.2	19.9791667	0	0	0	1373	1824	685	4119	14896948	
May-2018	0	0	0	0	0	0	0	0	0	0	0	0	0	14896948	
Jun-2018	1925	1925	1925	2.916666667	2.916666667	2.91666667	0	0	0	100	100	100	100	14897048	
													Previous Quarter	14897048	
Jul-18	1500	1500	1500	13.65	13.65	13.65	0	0	0	468	468	468	468	14897516	
Aug-18	1932.5	2300	1500	16.01483333	62.125	0	0	0	0	1115.857143	2130	210	15622	14913138	
Sep-18	1828.125	2200	1500	3.345833333	34.70833333	0	0	0	0	389.8571429	1190	60	2729	14915867	
													Previous Quarter	14915867	
Oct-2018	1883.333	2250	1450	53.38958333	95.9875	10.9666667	0	0	0	1830.5	3291	376	7322	14923189	
Nov-2018	1514.286	1800	1400	4.010416667	4.9875	3.03333333	0	0	0	137.5	171	104	275	14923464	
Dec-2018	1716.667	2100	1550	8.983333333	10.20833333	7.75833333	0	0	0	308	350	266	616	14924080	
												Total for year	**33062**	**14957142**	**Life Of well injected**

Total Injected	Avg Vol	Avg Flow
1/1/2018		
1/2/2018	544	15.86666667
1/3/2018		
1/4/2018		
1/5/2018		
1/6/2018		
1/7/2018		
1/8/2018		
1/9/2018		
1/10/2018		
1/11/2018		
1/12/2018	128	3.733333333
1/13/2018		
1/14/2018		
1/15/2018	664	19.36666667
1/16/2018	475	13.85416667
1/17/2018		
1/18/2018		
1/19/2018		
1/20/2018		
1/21/2018		
1/22/2018		
1/23/2018		
1/24/2018		
1/25/2018		
1/26/2018		
1/27/2018		
1/28/2018		
1/29/2018		
1/30/2018		
1/31/2018		

	Avg Vol	Avg Flow
2/1/2018	0	0
2/2/2018		
2/3/2018		
2/4/2018		
2/5/2018		
2/6/2018		
2/7/2018		
2/8/2018		
2/9/2018		
2/10/2018		
2/11/2018		
2/12/2018		
2/13/2018		
2/14/2018		
2/15/2018		
2/16/2018		
2/17/2018		
2/18/2018		
2/19/2018		
2/20/2018		
2/21/2018		
2/22/2018		
2/23/2018		
2/24/2018		
2/25/2018		
2/26/2018		
2/27/2018		
2/28/2018		

	Avg Vol	Avg Flow
3/1/2018	0	0
3/2/2018		
3/3/2018		
3/4/2018		
3/5/2018		
3/6/2018		
3/7/2018		
3/8/2018		
3/9/2018		
3/10/2018		
3/11/2018		
3/12/2018		
3/13/2018		
3/14/2018		
3/15/2018		
3/16/2018		
3/17/2018		
3/18/2018		
3/19/2018		
3/20/2018		
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3/23/2018		
3/24/2018		
3/25/2018		
3/26/2018		
3/27/2018		
3/28/2018		
3/29/2018		
3/30/2018		
3/31/2018		

	Avg Vol
4/1/2018	
4/2/2018	
4/3/2018	
4/4/2018	1824
4/5/2018	685
4/6/2018	1610
4/7/2018	
4/8/2018	
4/9/2018	
4/10/2018	
4/11/2018	
4/12/2018	
4/13/2018	
4/14/2018	
4/15/2018	
4/16/2018	
4/17/2018	
4/18/2018	
4/19/2018	
4/20/2018	
4/21/2018	
4/22/2018	
4/23/2018	
4/24/2018	
4/25/2018	
4/26/2018	
4/27/2018	
4/28/2018	
4/29/2018	
4/30/2018	

AVG	452.75	13.20520833		0	0		0	0		1373
MAX	664	19.36666667		0	0		0	0		1824
MIN	128	3.7333333		0	0.0000000		0	0.0000000		685
Total for mont	1811			0			0			4119

Avg Flow		Avg Vol	Avg Flow		Avg Vol	Avg Flow		Avg Vol	Avg Flow	
	5/1/2018	0	0	6/1/2018			7/1/2018			8/1/2018
	5/2/2018			6/2/2018			7/2/2018			8/2/2018
	5/3/2018			6/3/2018			7/3/2018			8/3/2018
53.2	5/4/2018			6/4/2018			7/4/2018			8/4/2018
19.97916667	5/5/2018			6/5/2018	100	2.916666667	7/5/2018	468	13.65	8/5/2018
46.95833333	5/6/2018			6/6/2018			7/6/2018			8/6/2018
	5/7/2018			6/7/2018			7/7/2018			8/7/2018
	5/8/2018			6/8/2018			7/8/2018			8/8/2018
	5/9/2018			6/9/2018			7/9/2018			8/9/2018
	5/10/2018			6/10/2018			7/10/2018			8/10/2018
	5/11/2018			6/11/2018			7/11/2018			8/11/2018
	5/12/2018			6/12/2018			7/12/2018			8/12/2018
	5/13/2018			6/13/2018			7/13/2018			8/13/2018
	5/14/2018			6/14/2018			7/14/2018			8/14/2018
	5/15/2018			6/15/2018			7/15/2018			8/15/2018
	5/16/2018			6/16/2018			7/16/2018			8/16/2018
	5/17/2018			6/17/2018			7/17/2018			8/17/2018
	5/18/2018			6/18/2018			7/18/2018			8/18/2018
	5/19/2018			6/19/2018			7/19/2018			8/19/2018
	5/20/2018			6/20/2018			7/20/2018			8/20/2018
	5/21/2018			6/21/2018			7/21/2018			8/21/2018
	5/22/2018			6/22/2018			7/22/2018			8/22/2018
	5/23/2018			6/23/2018			7/23/2018			8/23/2018
	5/24/2018			6/24/2018			7/24/2018			8/24/2018
	5/25/2018			6/25/2018			7/25/2018			8/25/2018
	5/26/2018			6/26/2018			7/26/2018			8/26/2018
	5/27/2018			6/27/2018			7/27/2018			8/27/2018
	5/28/2018			6/28/2018			7/28/2018			8/28/2018
	5/29/2018			6/29/2018			7/29/2018			8/29/2018
	5/30/2018			6/30/2018			7/30/2018			8/30/2018
	5/31/2018						7/31/2018			8/31/2018

40.04583333		0	0		100	2.916666667		468	13.65	
53.2		0	0		100	2.916666667		468	13.65	
19.9791667		0	0.0000000		100	2.9166667		468	13.6500000	
		0			100			468		

	0	9/1/2018		0	10/1/2018			11/1/2018			12/1/2018
	0	9/2/2018			10/2/2018			11/2/2018			12/2/2018
	0	9/3/2018			10/3/2018	1063	31.00416667	11/3/2018			12/3/2018
	0	9/4/2018			10/4/2018	3291	95.9875	11/4/2018			12/4/2018
		9/5/2018	60	1.75	10/5/2018	2592	75.6	11/5/2018			12/5/2018
1895		9/6/2018	660	19.25	10/6/2018			11/6/2018			12/6/2018
940	27.41666667	9/7/2018	60	1.75	10/7/2018			11/7/2018			12/7/2018
1140	33.25	9/8/2018		0	10/8/2018			11/8/2018			12/8/2018
1060	30.91666667	9/9/2018		0	10/9/2018			11/9/2018			12/9/2018
1040	30.33333333	9/10/2018	320		10/10/2018			11/10/2018			12/10/2018
1350	39.375	9/11/2018	1190	34.70833333	10/11/2018			11/11/2018			12/11/2018
2130	62.125	9/12/2018	320	9.333333333	10/12/2018			11/12/2018			12/12/2018
520	15.16666667	9/13/2018		0	10/13/2018			11/13/2018	171	4.9875	12/13/2018
1990	58.04166667	9/14/2018		0	10/14/2018			11/14/2018			12/14/2018
737	21.49583333	9/15/2018		0	10/15/2018			11/15/2018	104	3.033333333	12/15/2018
	0	9/16/2018			10/16/2018			11/16/2018			12/16/2018
	0	9/17/2018			10/17/2018			11/17/2018			12/17/2018
	0	9/18/2018		0	10/18/2018			11/18/2018			12/18/2018
		9/19/2018	119	3.470833333	10/19/2018			11/19/2018			12/19/2018
		9/20/2018		0	10/20/2018			11/20/2018			12/20/2018
	0	9/21/2018		0	10/21/2018			11/21/2018			12/21/2018
1300	37.91666667	9/22/2018		0	10/22/2018			11/22/2018			12/22/2018
210	6.125	9/23/2018			10/23/2018			11/23/2018			12/23/2018
	0	9/24/2018			10/24/2018	376	10.96666667	11/24/2018			12/24/2018
	0	9/25/2018		0	10/25/2018			11/25/2018			12/25/2018
		9/26/2018		0	10/26/2018			11/26/2018			12/26/2018
		9/27/2018		0	10/27/2018			11/27/2018			12/27/2018
	0	9/28/2018		0	10/28/2018			11/28/2018			12/28/2018
990	28.875	9/29/2018		0	10/29/2018			11/29/2018			12/29/2018
320	9.333333333	9/30/2018			10/30/2018			11/30/2018			12/30/2018
	0				10/31/2018						12/31/2018

1115.857	16.01483333		389.8571	3.345833333		1830.5	53.38958333		137.5	4.010416667	
2130	62.125		1190	34.70833333		3291	95.9875		171	4.9875	
210	0.0000000		60	0.0000000		376	10.9666667		104	3.0333333	
15622			2729			7322			275		

350	10.20833333
266	7.758333333

308	8.983333333
350	10.20833333
266	7.7583333
616	

	WH	AP	
1/1/18	2100	0	
1/2/18	2150		
1/3/18	2100		
1/4/18	200		
1/5/18	200		
1/6/18			
1/7/18			
1/8/18	1850		
1/9/18	1850		
1/10/18	1850		
1/11/18	1850		
1/12/18	2200		
1/13/18			
1/14/18			
1/15/18	2200		
1/16/18	2100		
1/17/18			
1/18/18			
1/19/18			
1/20/18			
1/21/18			
1/22/18			
1/23/18			
1/24/18			
1/25/18			
1/26/18			
1/27/18			
1/28/18			
1/29/18			
1/30/18			
1/31/18			
	1720.833	**0**	**AVG**
	200	**0**	**MIN**
	2200	**0**	**MAX**

	WH	AP	
2/1/18	0	0	
2/2/18			
2/3/18			
2/4/18			
2/5/18			
2/6/18			
2/7/18			
2/8/18			
2/9/18			
2/10/18			
2/11/18			
2/12/18			
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2/14/18			
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2/22/18			
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2/25/18			
2/26/18			
2/27/18			
2/28/18			
	0	**0**	**AVG**
	0	**0**	**MIN**
	0	**0**	**MAX**

	WH	AP	
3/1/18	0	0	
3/2/18			
3/3/18			
3/4/18			
3/5/18			
3/6/18			
3/7/18			
3/8/18			
3/9/18			
3/10/18			
3/11/18			
3/12/18			
3/13/18			
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3/25/18			
3/26/18			
3/27/18			
3/28/18			
3/29/18			
3/30/18			
3/31/18			
	0	**0**	**AVG**
	0	**0**	**MIN**
	0	**0**	**MAX**

	WH	AP	
4/1/18		0	
4/2/18			
4/3/18			
4/4/18	2200		
4/5/18	2200		
4/6/18	2150		
4/7/18			
4/8/18			
4/9/18			
4/10/18			
4/11/18			
4/12/18			
4/13/18			
4/14/18			
4/15/18			
4/16/18			
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4/20/18			
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4/23/18			
4/24/18			
4/25/18			
4/26/18			
4/27/18			
4/28/18			
4/29/18			
4/30/18			
	2183.333	**0**	**AVG**
	2150	**0**	**MIN**
	2200	**0**	**MAX**

	WH	AP	
5/1/18	0	0	
5/2/18			
5/3/18			
5/4/18			
5/5/18			
5/6/18			
5/7/18			
5/8/18			
5/9/18			
5/10/18			
5/11/18			
5/12/18			
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5/24/18			
5/25/18			
5/26/18			
5/27/18			
5/28/18			
5/29/18			
5/30/18			
5/31/18			
	0	**0**	**AVG**
	0	**0**	**MIN**
	0	**0**	**MAX**

	WH	AP	
6/1/18		0	
6/2/18			
6/3/18			
6/4/18	1925		
6/5/18			
6/6/18			
6/7/18			
6/8/18			
6/9/18			
6/10/18			
6/11/18			
6/12/18			
6/13/18			
6/14/18			
6/15/18			
6/16/18			
6/17/18			
6/18/18			
6/19/18			
6/20/18			
6/21/18			
6/22/18			
6/23/18			
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6/25/18			
6/26/18			
6/27/18			
6/28/18			
6/29/18			
6/30/18			
	1925	**0**	**AVG**
	1925	**0**	**MIN**
	1925	**0**	**MAX**

7/1/18
7/2/18
7/3/18
7/4/18
7/5/18
7/6/18
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7/8/18
7/9/18
7/10/18
7/11/18
7/12/18
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7/16/18
7/17/18
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7/23/18
7/24/18
7/25/18
7/26/18
7/27/18
7/28/18
7/29/18
7/30/18
7/31/18

WH	AP	
1500	0	
1500	**0**	**AVG**
1500	**0**	**MIN**
1500	**0**	**MAX**

	WH	AP	
8/1/18	1600	0	
8/2/18	1500		
8/3/18	1500		
8/4/18	1500		
8/5/18	1500		
8/6/18	1500		
8/7/18	2000		
8/8/18	2200		
8/9/18	2150		
8/10/18	2150		
8/11/18	2150		
8/12/18	2150		
8/13/18	2200		
8/14/18	2300		
8/15/18	2200		
8/16/18	2200		
8/17/18			
8/18/18			
8/19/18			
8/20/18			
8/21/18			
8/22/18	2100		
8/23/18	2000		
8/24/18			
8/25/18			
8/26/18			
8/27/18			
8/28/18			
8/29/18	1650		
8/30/18	2100		
8/31/18			
	1932.5	**0**	**AVG**
	1500	**0**	**MIN**
	2300	**0**	**MAX**

	WH	AP	
9/1/18		0	
9/2/18			
9/3/18			
9/4/18			
9/5/18	1600		
9/6/18	1900		
9/7/18	1900		
9/8/18	2200		
9/9/18			
9/10/18	1900		
9/11/18	1975		
9/12/18	1650		
9/13/18			
9/14/18			
9/15/18			
9/16/18			
9/17/18			
9/18/18			
9/19/18	1500		
9/20/18			
9/21/18			
9/22/18			
9/23/18			
9/24/18			
9/25/18			
9/26/18			
9/27/18			
9/28/18			
9/29/18			
9/30/18			
	1828.125	**0**	**AVG**
	1500	**0**	**MIN**
	2200	**0**	**MAX**

	WH
10/1/18	
10/2/18	
10/3/18	2100
10/4/18	2250
10/5/18	2100
10/6/18	
10/7/18	
10/8/18	
10/9/18	
10/10/18	
10/11/18	
10/12/18	
10/13/18	
10/14/18	
10/15/18	
10/16/18	
10/17/18	
10/18/18	
10/19/18	
10/20/18	
10/21/18	
10/22/18	
10/23/18	1500
10/24/18	1900
10/25/18	1450
10/26/18	
10/27/18	
10/28/18	
10/29/18	
10/30/18	
10/31/18	
	1883.333
	1450
	2250

AP	
0	
0	AVG
0	MIN
0	MAX

	WH	AP	
11/1/18		0	
11/2/18			
11/3/18	1400		
11/4/18			
11/5/18			
11/6/18			
11/7/18	1400		
11/8/18	1400		
11/9/18			
11/10/18			
11/11/18			
11/12/18			
11/13/18	1800		
11/14/18			
11/15/18	1400		
11/16/18			
11/17/18			
11/18/18			
11/19/18			
11/20/18			
11/21/18			
11/22/18			
11/23/18			
11/24/18			
11/25/18			
11/26/18			
11/27/18			
11/28/18	1600		
11/29/18	1600		
11/30/18			
	1514.286	**0**	**AVG**
	1400	**0**	**MIN**
	1800	**0**	**MAX**

	WH	AP	
12/1/18		0	
12/2/18			
12/3/18			
12/4/18			
12/5/18			
12/6/18			
12/7/18			
12/8/18			
12/9/18			
12/10/18	1550		
12/11/18	1550		
12/12/18			
12/13/18			
12/14/18			
12/15/18			
12/16/18			
12/17/18			
12/18/18			
12/19/18	1550		
12/20/18	1550		
12/21/18			
12/22/18			
12/23/18	2100		
12/24/18			
12/25/18			
12/26/18			
12/27/18			
12/28/18			
12/29/18	2000		
12/30/18			
12/31/18			
	1716.667	**0**	**AVG**
	1550	**0**	**MIN**
	2100	**0**	**MAX**

Appendix B

October 30, 2018

Ms. Shacie Murray
Agua Moss LLC
P.O. Box 600
Farmington, New Mexico 87499

Re: Sunco Disposal #1
Injection Water Quarterly Monitoring
3rd Quarter 2018

Dear Ms. Murray:

This report summarizes the sample collection, field screening, and laboratory analysis of the injection water at the Agua Moss LLC Sunco Disposal #1 well for the 3rd Quarter 2018. Injection water of the Class I Sunco Disposal #1 well is assessed on a quarterly basis in accordance with 20.6.5207(B) NMAC.

Field Activities
Rule Engineering, LLC (Rule) personnel collected one injection water sample (S-7) from the process line inside the pump building at the location on August 15, 2018. Injection water was discharged directly from the valve of the process line into laboratory sample containers and a clean container for field screening.

Sample Collection and Field Screening Procedures
The injection water sample (S-7) was field screened for time sensitive parameters including pH, temperature, reduction potential (Eh), specific conductance, and total dissolved solids (TDS). Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory grade standards.

The sampled injection water was placed into laboratory supplied containers, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

Field Screening and Laboratory Analytical Results
The field screening and laboratory analytical results are summarized in the attached Table 1.

QA/QC Considerations
Field measurements for time sensitive parameters including pH, temperature, reduction potential, and specific conductance more accurately reflect the characteristics of the injection water than laboratory results for these parameters due to their rapidly changing nature when removed from the stable environment of

the process line. The hold time qualifier is indicated on the laboratory report for pH as the hold time of 15 minutes from collection was exceeded during transport prior to analysis. Similarly, the hold time was exceeded corrosivity by pH.

A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids.

The recovery of a surrogate spike duplicate for reactive cyanide was below the anticipated percentage range due to dilution or matrix interference.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Rule Engineering appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-1055.

Sincerely,
Rule Engineering, LLC

Heather M. Woods, P.G.
Area Manager/Geologist

Attachments:

Table 1. Summary of Field Screening and Laboratory Analytical Results
Laboratory Analytical Reports (Hall: 1808A46)

Table 1. Summary of Field Screening and Laboratory Analytical Results

Sample ID	S-7			
Collection Date	8/15/2018		Units	Toxicity Characteristic Concentrations
Analyte	Laboratory Results	Field Results		
pH	7.56 H	7.2	su	
Temperature	--	26.1	°C	
Reduction Potential	--	-290	mV	
Specific Conductance	4,400	3,880	µmhos/cm	
Specific Gravity	0.9994	--		
Total Dissolved Solids	2,560 D	3,250	mg/L	
Bicarbonate (As $CaCO_3$)	368.0	--	mg/L	
Carbonate (As $CaCO_3$)	<2.000	--	mg/L	
Flouride	<0.50	--	mg/L	
Chloride	930	--	mg/L	
Bromide	1.6	--	mg/L	
Phosphorus, Orthophosphate	<2.5	--	mg/L	
Sulfate	300	--	mg/L	
Nitrate + Nitrite (as N)	<1.0	--	mg/L	
Calcium	45	--	mg/L	
Magnesium	4.8	--	mg/L	
Potassium	18	--	mg/L	
Sodium	810	--	mg/L	
Reactive Cyanide	<0.00500 S	--	mg/L	
Reactive Sulfide	<0.0500	--	mg/L	
Flashpoint	Did not flash at 170°F	--		
Corrosivity by pH	7.16 H	--	su	
Arsenic	<0.020	--	mg/L	5.0 mg/L
Barium	0.55	--	mg/L	100.0 mg/L
Benzene	<0.50	--	mg/L	0.5 mg/L
Cadmium	<0.0020	--	mg/L	1.0 mg/L
Carbon tetrachloride	<0.50	--	mg/L	0.5 mg/L
Chlordane	<0.030	--	mg/L	0.03 mg/L
Chlorobenzene	<100	--	mg/L	100.0 mg/L
Chloroform	<6.0	--	mg/L	6.0 mg/L
Chromium	<0.0060	--	mg/L	5.0 mg/L
Cresols, Total	<200	--	mg/L	200 mg/L
1,4-Dichlorobenzene	<7.5	--	mg/L	7.5 mg/L
1,2-Dichloroethane	<0.50	--	mg/L	0.5 mg/L
1,1-Dichloroethene	<0.70	--	mg/L	0.7 mg/L
2,4-Dinitroltoluene	<0.13	--	mg/L	0.13 mg/L
Hexachlorobenzene	<0.13	--	mg/L	0.13 mg/L
Hexachlorobutadiene	<0.50	--	mg/L	0.5 mg/L
Hexachloroethane	<3.0	--	mg/L	3.0 mg/L
Lead	<0.0050	--	mg/L	5.0 mg/L
Mercury	<0.00020	--	mg/L	0.2 mg/L
Methyl ethyl ketone	<200	--	mg/L	200.0 mg/L
Nitrobenzene	<2.0	--	mg/L	2.0 mg/L
Pentachlorophenol	<100	--	mg/L	100.0 mg/L
Pyridine	<5.0	--	mg/L	5.0 mg/L
Selenium	<0.050	--	mg/L	1.0 mg/L
Silver	<0.0050	--	mg/L	5.0 mg/L
Tetrachloroethylene	<0.70	--	mg/L	0.7 mg/L
Trichloreoethylene	<0.50	--	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	<400	--	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	<2.0	--	mg/L	2.0 mg/L
Vinyl chloride	<0.20	--	mg/L	0.2 mg/L

Notes: su - standard units
°C - degrees Celcius
°F - degrees Farenheit
mV - millivolts
µmhos/cm - micromohs per centimeter
mg/L - milligrams per liter
H - Holding times for preparation or analysis exceeded
D - Sample diluted due to matrix
S - % Recovery outside of range due to dilution or matix

1.00 Concentration exeeds the Toxicity Characteristic Concent

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

September 11, 2018

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Aqua Moss Sunco SWD 1 OrderNo.: 1808A46

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/16/2018 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 #NM0901

Sincerely,



Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: S-7 (8/15/18)
Project: Aqua Moss Sunco SWD 1
Collection Date: 8/15/2018 10:35:00 AM
Lab ID: 1808A46-001 **Matrix:** AQUEOUS **Received Date:** 8/16/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP						Analyst: **TOM**	
Chlordane	ND	0.030		mg/L	1	8/21/2018 1:50:39 PM	39882
Surr: Decachlorobiphenyl	74.5	47.2-117		%Rec	1	8/21/2018 1:50:39 PM	39882
Surr: Tetrachloro-m-xylene	59.9	26.4-126		%Rec	1	8/21/2018 1:50:39 PM	39882
EPA METHOD 8270C TCLP						Analyst: **DAM**	
2-Methylphenol	ND	200		mg/L	1	8/24/2018 1:00:19 PM	39924
3+4-Methylphenol	ND	200		mg/L	1	8/24/2018 1:00:19 PM	39924
Phenol	ND	200		mg/L	1	8/24/2018 1:00:19 PM	39924
2,4-Dinitrotoluene	ND	0.13		mg/L	1	8/24/2018 1:00:19 PM	39924
Hexachlorobenzene	ND	0.13		mg/L	1	8/24/2018 1:00:19 PM	39924
Hexachlorobutadiene	ND	0.50		mg/L	1	8/24/2018 1:00:19 PM	39924
Hexachloroethane	ND	3.0		mg/L	1	8/24/2018 1:00:19 PM	39924
Nitrobenzene	ND	2.0		mg/L	1	8/24/2018 1:00:19 PM	39924
Pentachlorophenol	ND	100		mg/L	1	8/24/2018 1:00:19 PM	39924
Pyridine	ND	5.0		mg/L	1	8/24/2018 1:00:19 PM	39924
2,4,5-Trichlorophenol	ND	400		mg/L	1	8/24/2018 1:00:19 PM	39924
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	8/24/2018 1:00:19 PM	39924
Cresols, Total	ND	200		mg/L	1	8/24/2018 1:00:19 PM	39924
Surr: 2-Fluorophenol	30.2	15-73.6		%Rec	1	8/24/2018 1:00:19 PM	39924
Surr: Phenol-d5	38.3	15-63.4		%Rec	1	8/24/2018 1:00:19 PM	39924
Surr: 2,4,6-Tribromophenol	62.8	15-119		%Rec	1	8/24/2018 1:00:19 PM	39924
Surr: Nitrobenzene-d5	59.2	33.5-111		%Rec	1	8/24/2018 1:00:19 PM	39924
Surr: 2-Fluorobiphenyl	57.7	31.8-101		%Rec	1	8/24/2018 1:00:19 PM	39924
Surr: 4-Terphenyl-d14	65.8	17.2-84.7		%Rec	1	8/24/2018 1:00:19 PM	39924
SPECIFIC GRAVITY						Analyst: **SRM**	
Specific Gravity	0.9994	0			1	9/6/2018 1:43:00 PM	R53967
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Fluoride	ND	0.50		mg/L	5	8/17/2018 12:09:45 AM	R53524
Chloride	930	50	*	mg/L	100	8/31/2018 10:29:25 AM	R53878
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/17/2018 12:09:45 AM	R53524
Bromide	1.6	0.50		mg/L	5	8/17/2018 12:09:45 AM	R53524
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/17/2018 12:09:45 AM	R53524
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/17/2018 12:09:45 AM	R53524
Sulfate	300	10	*	mg/L	20	8/17/2018 12:22:36 AM	R53524
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **sat**	
Conductivity	4400	5.0		µmhos/c	1	8/21/2018 8:44:13 PM	R53613
SM2320B: ALKALINITY						Analyst: **sat**	
Bicarbonate (As CaCO3)	368.0	20.00		mg/L Ca	1	8/21/2018 8:44:13 PM	R53613

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: Rule Engineering LLC
Client Sample ID: S-7 (8/15/18)
Project: Aqua Moss Sunco SWD 1
Collection Date: 8/15/2018 10:35:00 AM
Lab ID: 1808A46-001 **Matrix:** AQUEOUS **Received Date:** 8/16/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2320B: ALKALINITY						Analyst: **sat**	
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	8/21/2018 8:44:13 PM	R53613
Total Alkalinity (as CaCO3)	368.0	20.00		mg/L Ca	1	8/21/2018 8:44:13 PM	R53613
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2560	100	*D	mg/L	1	8/22/2018 7:03:00 PM	39920
SM4500-H+B / 9040C: PH						Analyst: **sat**	
pH	7.56		H	pH units	1	8/21/2018 8:44:13 PM	R53613
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.00020		mg/L	1	8/29/2018 12:38:31 PM	40028
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **pmf**	
Calcium	45	1.0		mg/L	1	8/22/2018 5:42:15 PM	B53642
Magnesium	4.8	1.0		mg/L	1	8/22/2018 5:42:15 PM	B53642
Potassium	18	1.0		mg/L	1	8/22/2018 5:42:15 PM	B53642
Sodium	810	10		mg/L	10	8/22/2018 6:32:28 PM	B53642
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **pmf**	
Arsenic	ND	0.020		mg/L	1	8/30/2018 1:29:30 PM	40021
Barium	0.55	0.020		mg/L	1	8/20/2018 12:02:09 PM	39852
Cadmium	ND	0.0020		mg/L	1	8/20/2018 12:02:09 PM	39852
Chromium	ND	0.0060		mg/L	1	8/20/2018 12:02:09 PM	39852
Lead	ND	0.0050		mg/L	1	8/22/2018 4:20:54 PM	39852
Selenium	ND	0.050		mg/L	1	8/29/2018 7:07:55 PM	40021
Silver	ND	0.0050		mg/L	1	8/20/2018 12:02:09 PM	39852
TCLP VOLATILES BY 8260B						Analyst: **RAA**	
Benzene	ND	0.50		mg/L	200	8/20/2018 9:00:00 PM	T53570
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	8/20/2018 9:00:00 PM	T53570
2-Butanone	ND	200		mg/L	200	8/20/2018 9:00:00 PM	T53570
Carbon Tetrachloride	ND	0.50		mg/L	200	8/20/2018 9:00:00 PM	T53570
Chloroform	ND	6.0		mg/L	200	8/20/2018 9:00:00 PM	T53570
1,4-Dichlorobenzene	ND	7.5		mg/L	200	8/20/2018 9:00:00 PM	T53570
1,1-Dichloroethene	ND	0.70		mg/L	200	8/20/2018 9:00:00 PM	T53570
Hexachlorobutadiene	ND	0.50		mg/L	200	8/20/2018 9:00:00 PM	T53570
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	8/20/2018 9:00:00 PM	T53570
Trichloroethene (TCE)	ND	0.50		mg/L	200	8/20/2018 9:00:00 PM	T53570
Vinyl chloride	ND	0.20		mg/L	200	8/20/2018 9:00:00 PM	T53570
Chlorobenzene	ND	100		mg/L	200	8/20/2018 9:00:00 PM	T53570
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	200	8/20/2018 9:00:00 PM	T53570
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	200	8/20/2018 9:00:00 PM	T53570

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: Rule Engineering LLC
Client Sample ID: S-7 (8/15/18)
Project: Aqua Moss Sunco SWD 1
Collection Date: 8/15/2018 10:35:00 AM
Lab ID: 1808A46-001 **Matrix:** AQUEOUS **Received Date:** 8/16/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
TCLP VOLATILES BY 8260B						Analyst: **RAA**	
Surr: Dibromofluoromethane	110	70-130		%Rec	200	8/20/2018 9:00:00 PM	T53570
Surr: Toluene-d8	89.7	70-130		%Rec	200	8/20/2018 9:00:00 PM	T53570

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

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	ND	J3	0.00500	1	08/19/2018 15:54	WG1153973

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	7.16	T8	1	08/20/2018 15:41	WG1154862

Sample Narrative:
L1018521-01 WG1154862: 7.16 at 17.6C

Wet Chemistry by Method 4500P E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Phosphate,Ortho	0.571	T8	0.0250	1	08/17/2018 12:33	WG1153804

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	ND		0.0500	1	08/20/2018 17:50	WG1154526

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	08/21/2018 15:32	WG1154768

Method Blank (MB)

(MB) R3334877-1 08/19/18 15:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1018125-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1018125-02 08/19/18 15:33 • (DUP) R3334877-4 08/19/18 15:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	ND	0.000	1	0.000		20

L1018564-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1018564-02 08/19/18 15:57 • (DUP) R3334877-9 08/19/18 15:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3334877-2 08/19/18 15:27 • (LCSD) R3334877-3 08/19/18 15:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Reactive Cyanide	0.100	0.101	0.0928	101	92.8	85.0-115			8.46	20

L1018156-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018156-02 08/19/18 15:35 • (MS) R3334877-5 08/19/18 15:38 • (MSD) R3334877-6 08/19/18 15:40

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0978	0.0927	95.8	90.7	1	75.0-125			5.35	20

L1018521-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018521-01 08/19/18 15:54 • (MS) R3334877-7 08/19/18 15:55 • (MSD) R3334877-8 08/19/18 15:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0942	0.0766	94.2	76.6	1	75.0-125		J3	20.6	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335066-1 08/20/18 15:41 • (LCSD) R3335066-2 08/20/18 15:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
Corrosivity by pH	10.0	9.99	10.0	99.9	100	99.0-101			0.200	1

Sample Narrative:

LCS: 9.99 at 19.1C

LCSD: 10.0 at 19.1C

WG1153804

Wet Chemistry by Method 4500P E-2011

QUALITY CONTROL SUMMARY

L1018521-01

ONELAB NATIONWIDE

Method Blank (MB)

(MB) R3334550-1 08/17/18 12:32

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Phosphate,Ortho	U		0.00800	0.0250

L1018521-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1018521-01 08/17/18 12:33 • (DUP) R3334550-4 08/17/18 12:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Phosphate,Ortho	0.571	0.566	1	0.880		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3334550-2 08/17/18 12:32 • (LCSD) R3334550-3 08/17/18 12:32

	Spike Amount	LCS Result	LCSD Result	LCS Rec	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Phosphate,Ortho	0.240	0.215	0.219	87.3	89.6	85.0-115			1.84	20

L1018521-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1018521-01 08/17/18 12:33 • (MS) R3334550-5 08/17/18 12:35 • (MSD) R3334550-6 08/17/18 12:37

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphate,Ortho	0.500	0.571	1.03	1.07	91.4	90.4	1	80.0-120	E	E	0.488	20

Method Blank (MB)

(MB) R3335121-1 08/20/18 17:41

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.0650	0.0500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335121-2 08/20/18 17:41 • (LCSD) R3335121-3 08/20/18 17:42

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Reactive Sulfide	0.500	0.478	0.479	95.6	95.8	85.0-115			0.209	20

L1018253-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1018253-04 08/21/18 15:32 • (DUP) R3335411-3 08/21/18 15:32

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335411-1 08/21/18 15:32 • (LCSD) R3335411-2 08/21/18 15:32

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	deg F	deg F	deg F	%	%	%			%	%
Flashpoint	82.0	84.8	83.8	103	102	96.0-104			1.19	10

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53524**	RunNo: **53524**
Prep Date:	Analysis Date: **8/16/2018**	SeqNo: **1764165** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53524**	RunNo: **53524**
Prep Date:	Analysis Date: **8/16/2018**	SeqNo: **1764166** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.0	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.4	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.8	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.3	0.50	10.00	0	92.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778097** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778098** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.1	90	110			

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**MB-39882**	SampType:	**MBLK**	TestCode:	**EPA Method 8081: Pesticides TCLP**					
Client ID:	**PBW**	Batch ID:	**39882**	RunNo:	**53592**					
Prep Date:	**8/20/2018**	Analysis Date:	**8/21/2018**	SeqNo:	**1767653**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0019		0.002500		75.1	47.2	117			
Surr: Tetrachloro-m-xylene	0.0020		0.002500		78.5	26.4	126			

Sample ID	**LCS-39882**	SampType:	**LCS**	TestCode:	**EPA Method 8081: Pesticides TCLP**					
Client ID:	**LCSW**	Batch ID:	**39882**	RunNo:	**53592**					
Prep Date:	**8/20/2018**	Analysis Date:	**8/21/2018**	SeqNo:	**1767654**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0016		0.002500		64.4	47.2	117			
Surr: Tetrachloro-m-xylene	0.00084		0.002500		33.5	26.4	126			

Sample ID	**LCSD-39882**	SampType:	**LCSD**	TestCode:	**EPA Method 8081: Pesticides TCLP**					
Client ID:	**LCSS02**	Batch ID:	**39882**	RunNo:	**53592**					
Prep Date:	**8/20/2018**	Analysis Date:	**8/21/2018**	SeqNo:	**1767655**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0019		0.002500		74.0	47.2	117	0	0	
Surr: Tetrachloro-m-xylene	0.0015		0.002500		60.8	26.4	126	0	0	

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **TCLP Volatiles by 8260B**
Client ID: **LCSW**	Batch ID: **T53570**	RunNo: **53570**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.023	0.00017	0.02000	0	114	70	130			
1,1-Dichloroethene	0.024	0.00012	0.02000	0	121	70	130			
Trichloroethene (TCE)	0.022	0.00026	0.02000	0	108	70	130			
Chlorobenzene	0.020	0.00029	0.02000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	0.0094		0.01000		94.0	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		101	70	130			
Surr: Dibromofluoromethane	0.0098		0.01000		98.4	70	130			
Surr: Toluene-d8	0.0090		0.01000		89.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **TCLP Volatiles by 8260B**
Client ID: **PBW**	Batch ID: **T53570**	RunNo: **53570**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766064** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50								
1,2-Dichloroethane (EDC)	ND	0.50								
2-Butanone	ND	200								
Carbon Tetrachloride	ND	0.50								
Chloroform	ND	6.0								
1,4-Dichlorobenzene	ND	7.5								
1,1-Dichloroethene	ND	0.70								
Tetrachloroethene (PCE)	ND	0.70								
Trichloroethene (TCE)	ND	0.50								
Vinyl chloride	ND	0.20								
Chlorobenzene	ND	100								
Surr: 1,2-Dichloroethane-d4	0.0095		0.01000		94.9	70	130			
Surr: 4-Bromofluorobenzene	0.0098		0.01000		98.4	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		104	70	130			
Surr: Toluene-d8	0.0090		0.01000		90.3	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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **1808a46-001cms** SampType: **MS** TestCode: **EPA Method 8270C TCLP**

Client ID: **S-7 (8/15/18)** Batch ID: **39924** RunNo: **53703**

Prep Date: **8/22/2018** Analysis Date: **8/24/2018** SeqNo: **1771449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.059	0.0010	0.1000	0	59.2	23.9	129			
3+4-Methylphenol	0.14	0.0010	0.2000	0.03198	53.9	15	167			
2,4-Dinitrotoluene	0.051	0.0010	0.1000	0	51.4	15	147			
Hexachlorobenzene	0.054	0.0010	0.1000	0	54.1	41.4	136			
Hexachlorobutadiene	0.051	0.0010	0.1000	0	51.3	16.2	134			
Hexachloroethane	0.045	0.0010	0.1000	0	45.1	20.6	124			
Nitrobenzene	0.059	0.0010	0.1000	0	58.9	39.5	134			
Pentachlorophenol	0.053	0.0010	0.1000	0	52.8	15	137			
Pyridine	0.0043	0.0010	0.1000	0	4.30	15	129			S
2,4,5-Trichlorophenol	0.058	0.0010	0.1000	0	57.8	15	158			
2,4,6-Trichlorophenol	0.061	0.0010	0.1000	0	60.9	15	153			
Cresols, Total	0.20	0.0010	0.3000	0.03198	55.7	10.6	179			
Surr: 2-Fluorophenol	0.059		0.2000		29.6	15	73.6			
Surr: Phenol-d5	0.067		0.2000		33.6	15	63.4			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		56.9	15	119			
Surr: Nitrobenzene-d5	0.061		0.1000		60.6	33.5	111			
Surr: 2-Fluorobiphenyl	0.054		0.1000		53.9	31.8	101			
Surr: 4-Terphenyl-d14	0.062		0.1000		61.8	17.2	84.7			

Sample ID **1808a46-001cmsd** SampType: **MSD** TestCode: **EPA Method 8270C TCLP**

Client ID: **S-7 (8/15/18)** Batch ID: **39924** RunNo: **53703**

Prep Date: **8/22/2018** Analysis Date: **8/24/2018** SeqNo: **1771450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.052	0.0010	0.1000	0	52.5	23.9	129	12.0	20	
3+4-Methylphenol	0.12	0.0010	0.2000	0.03198	46.4	15	167	11.4	20	
2,4-Dinitrotoluene	0.045	0.0010	0.1000	0	45.0	15	147	13.2	23.2	
Hexachlorobenzene	0.058	0.0010	0.1000	0	57.8	41.4	136	6.54	20	
Hexachlorobutadiene	0.045	0.0010	0.1000	0	45.4	16.2	134	12.4	20	
Hexachloroethane	0.042	0.0010	0.1000	0	41.6	20.6	124	8.08	31.3	
Nitrobenzene	0.051	0.0010	0.1000	0	51.4	39.5	134	13.6	26.6	
Pentachlorophenol	0.056	0.0010	0.1000	0	55.9	15	137	5.63	27.9	
Pyridine	0.014	0.0010	0.1000	0	13.8	15	129	105	47.4	RS
2,4,5-Trichlorophenol	0.054	0.0010	0.1000	0	54.4	15	158	6.03	36.9	
2,4,6-Trichlorophenol	0.059	0.0010	0.1000	0	58.7	15	153	3.68	37.2	
Cresols, Total	0.18	0.0010	0.3000	0.03198	48.4	10.6	179	11.5	27.4	
Surr: 2-Fluorophenol	0.057		0.2000		28.5	15	73.6	0	0	
Surr: Phenol-d5	0.061		0.2000		30.5	15	63.4	0	0	
Surr: 2,4,6-Tribromophenol	0.12		0.2000		59.7	15	119	0	0	

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **1808a46-001cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C TCLP**
Client ID: **S-7 (8/15/18)**	Batch ID: **39924**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.051		0.1000		50.9	33.5	111	0	0	
Surr: 2-Fluorobiphenyl	0.050		0.1000		49.6	31.8	101	0	0	
Surr: 4-Terphenyl-d14	0.067		0.1000		66.8	17.2	84.7	0	0	

Sample ID **lcs-39924**	SampType: **LCS**	TestCode: **EPA Method 8270C TCLP**
Client ID: **LCSS**	Batch ID: **39924**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.067	0.0010	0.1000	0	66.7	32.1	120			
3+4-Methylphenol	0.14	0.0010	0.2000	0	70.0	10.9	204			
2,4-Dinitrotoluene	0.060	0.0010	0.1000	0	59.6	41.9	116			
Hexachlorobenzene	0.066	0.0010	0.1000	0	65.8	37.7	99.4			
Hexachlorobutadiene	0.070	0.0010	0.1000	0	70.5	30.6	107			
Hexachloroethane	0.066	0.0010	0.1000	0	66.2	27.4	121			
Nitrobenzene	0.070	0.0010	0.1000	0	69.9	28.6	134			
Pentachlorophenol	0.062	0.0010	0.1000	0	62.0	7.71	111			
Pyridine	0.060	0.0010	0.1000	0	59.5	8.54	92.4			
2,4,5-Trichlorophenol	0.066	0.0010	0.1000	0	65.7	25.3	146			
2,4,6-Trichlorophenol	0.068	0.0010	0.1000	0	67.8	21.5	145			
Cresols, Total	0.21	0.0010	0.3000	0	68.9	30	136			
Surr: 2-Fluorophenol	0.12		0.2000		61.9	15	73.6			
Surr: Phenol-d5	0.13		0.2000		63.5	15	63.4			S
Surr: 2,4,6-Tribromophenol	0.12		0.2000		62.3	15	119			
Surr: Nitrobenzene-d5	0.077		0.1000		76.9	33.5	111			
Surr: 2-Fluorobiphenyl	0.065		0.1000		64.9	31.8	101			
Surr: 4-Terphenyl-d14	0.070		0.1000		70.2	17.2	84.7			

Sample ID **mb-39924**	SampType: **MBLK**	TestCode: **EPA Method 8270C TCLP**
Client ID: **PBS**	Batch ID: **39924**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **mb-39924**	SampType: **MBLK**	TestCode: **EPA Method 8270C TCLP**
Client ID: **PBS**	Batch ID: **39924**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.11		0.2000		53.0	15	73.6			
Surr: Phenol-d5	0.10		0.2000		51.9	15	63.4			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		56.8	15	119			
Surr: Nitrobenzene-d5	0.062		0.1000		61.6	33.5	111			
Surr: 2-Fluorobiphenyl	0.061		0.1000		61.3	31.8	101			
Surr: 4-Terphenyl-d14	0.062		0.1000		62.5	17.2	84.7			

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**lcs-1 98.3uS eC**	SampType:	**lcs**	TestCode:	**SM2510B: Specific Conductance**					
Client ID:	**LCSW**	Batch ID:	**R53613**	RunNo:	**53613**					
Prep Date:		Analysis Date:	**8/21/2018**	SeqNo:	**1768223**	Units:	**µmhos/cm**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		99	5.0	98.30	0	100	80	120			

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**MB-40028**	SampType:	**MBLK**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**PBW**	Batch ID:	**40028**	RunNo:	**53784**					
Prep Date:	**8/28/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775035**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40028**	SampType:	**LCS**	TestCode:	**EPA Method 7470: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40028**	RunNo:	**53784**					
Prep Date:	**8/28/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775036**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53642**	RunNo: **53642**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769047** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53642**	RunNo: **53642**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	98.1	80	120			
Magnesium	50	1.0	50.00	0	100	80	120			
Potassium	50	1.0	50.00	0	99.5	80	120			
Sodium	51	1.0	50.00	0	103	80	120			

Sample ID **1808A46-001EMS**	SampType: **MS**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **S-7 (8/15/18)**	Batch ID: **B53642**	RunNo: **53642**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	97	1.0	50.00	45.26	103	75	125			
Magnesium	54	1.0	50.00	4.810	99.2	75	125			
Potassium	66	1.0	50.00	17.64	95.8	75	125			

Sample ID **1808A46-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 6010B: Dissolved Metals**
Client ID: **S-7 (8/15/18)**	Batch ID: **B53642**	RunNo: **53642**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	95	1.0	50.00	45.26	100	75	125	1.23	20	
Magnesium	54	1.0	50.00	4.810	98.2	75	125	0.868	20	
Potassium	65	1.0	50.00	17.64	95.0	75	125	0.641	20	

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**MB-39852**	SampType:	**MBLK**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID:	**39852**	RunNo:	**53550**					
Prep Date:	**8/16/2018**	Analysis Date:	**8/20/2018**	SeqNo:	**1765745**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID	**LCS-39852**	SampType:	**LCS**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID:	**39852**	RunNo:	**53550**					
Prep Date:	**8/16/2018**	Analysis Date:	**8/20/2018**	SeqNo:	**1765747**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.020	0.5000	0	104	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.5	80	120			
Chromium	0.52	0.0060	0.5000	0	104	80	120			
Silver	0.10	0.0050	0.1000	0	104	80	120			

Sample ID	**MB-39852**	SampType:	**MBLK**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID:	**39852**	RunNo:	**53642**					
Prep Date:	**8/16/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1768995**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID	**LCS-39852**	SampType:	**LCS**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID:	**39852**	RunNo:	**53642**					
Prep Date:	**8/16/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1768997**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.49	0.0050	0.5000	0	98.5	80	120			

Sample ID	**MB-40021**	SampType:	**MBLK**	TestCode:	**EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID:	**40021**	RunNo:	**53785**					
Prep Date:	**8/28/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775201**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**LCS-40021**	SampType: **LCS**			TestCode: **EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID: **40021**			RunNo: **53785**					
Prep Date:	**8/28/2018**	Analysis Date: **8/29/2018**			SeqNo: **1775203**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.4	80	120			

Sample ID	**MB-40021**	SampType: **MBLK**			TestCode: **EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID: **40021**			RunNo: **53804**					
Prep Date:	**8/28/2018**	Analysis Date: **8/29/2018**			SeqNo: **1775493**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.050								

Sample ID	**LCS-40021**	SampType: **LCS**			TestCode: **EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID: **40021**			RunNo: **53804**					
Prep Date:	**8/28/2018**	Analysis Date: **8/29/2018**			SeqNo: **1775495**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.48	0.050	0.5000	0	95.0	80	120			

Sample ID	**MB-40021**	SampType: **MBLK**			TestCode: **EPA 6010B: Total Recoverable Metals**					
Client ID:	**PBW**	Batch ID: **40021**			RunNo: **53804**					
Prep Date:	**8/28/2018**	Analysis Date: **8/29/2018**			SeqNo: **1775530**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID	**LCS-40021**	SampType: **LCS**			TestCode: **EPA 6010B: Total Recoverable Metals**					
Client ID:	**LCSW**	Batch ID: **40021**			RunNo: **53804**					
Prep Date:	**8/28/2018**	Analysis Date: **8/29/2018**			SeqNo: **1775532**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			

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#: **1808A46**

11-Sep-18

Client: Rule Engineering LLC

Project: Aqua Moss Sunco SWD 1

Sample ID	**mb-1 alk**	SampType:	**MBLK**		TestCode:	**SM2320B: Alkalinity**					
Client ID:	**PBW**	Batch ID:	**R53613**		RunNo:	**53613**					
Prep Date:		Analysis Date:	**8/21/2018**		SeqNo:	**1768149**	Units:	**mg/L CaCO3**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		ND	20.00								

Sample ID	**lcs-1 alk**	SampType:	**LCS**		TestCode:	**SM2320B: Alkalinity**					
Client ID:	**LCSW**	Batch ID:	**R53613**		RunNo:	**53613**					
Prep Date:		Analysis Date:	**8/21/2018**		SeqNo:	**1768150**	Units:	**mg/L CaCO3**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		77.44	20.00	80.00	0	96.8	90	110			

Sample ID	**mb-2 alk**	SampType:	**mblk**		TestCode:	**SM2320B: Alkalinity**					
Client ID:	**PBW**	Batch ID:	**R53613**		RunNo:	**53613**					
Prep Date:		Analysis Date:	**8/21/2018**		SeqNo:	**1768175**	Units:	**mg/L CaCO3**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		ND	20.00								

Sample ID	**lcs-2 alk**	SampType:	**LCS**		TestCode:	**SM2320B: Alkalinity**					
Client ID:	**LCSW**	Batch ID:	**R53613**		RunNo:	**53613**					
Prep Date:		Analysis Date:	**8/21/2018**		SeqNo:	**1768176**	Units:	**mg/L CaCO3**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		80.40	20.00	80.00	0	101	90	110			

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#: **1808A46**
11-Sep-18

Client: Rule Engineering LLC
Project: Aqua Moss Sunco SWD 1

Sample ID	**MB-39920**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**39920**	RunNo:	**53635**					
Prep Date:	**8/21/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1768757**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-39920**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**39920**	RunNo:	**53635**					
Prep Date:	**8/21/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1768758**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

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: RULE ENGINEERING LL Work Order Number: 1808A46 RcptNo: 1

Received By: Anne Thorne 8/16/2018 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 8/16/2018 12:07:07 PM Anne Thorne

Reviewed By: ENM 8/16/18

Labeled by: JAB 08/16/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 3 2 (<2 or >12 unless noted) AS 08/16/18

Adjusted? No

Checked by: JAB 08/16/18

Special Handling (if applicable)

15. 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:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Dr, Ste 205
Farmington, NM 87401

Phone #: (505) 716-2787

email or Fax#: hwoods@ruleengineering.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Agua Moss Sunco SWD #1

Project #:

Project Manager: Heather Woods

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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. 1808446	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	See Attached				Air Bubbles (Y or N)
8/15/18	1035	Water	S-7 (8/15/18)	(1) 200mL Plastic	HNO_3	-001												X				
				(1) 500mL Plastic	NaOH	-002																
				(1) 500mL Plastic	Zinc Acetate NaOH	-003																
				(1) 125mL Plastic	H_2SO_4	-004																
				(2) 500mL Plastic	Non	-005																
				(1) 125mL Plastic	HNO_3 Filtered	-006																
				(5) 1L Amber Glass	Non	-007																
				(3) 40mL VOA	HCl	-008																

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/15/18	1713	Heather M. Woods	Christine Walters	8/15/18	1713
8/15/18	1814	Christine Walters		08/16/18	0700

Remarks:
Direct Bill to Agua Moss - Rates per Andy
See Attached Pages (2)

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.

Characteristic of toxicity using the Toxicity Characteristic Leaching Procedure, EPA SW-846 Test Method 1311 (see Table 1, 40 CFR 261.24(b)).

QUARTERLY MONITORING LIST			
EPA HW No.	**Contaminant**	**SW-846 Methods**	**Regulatory Level (mg/L)**
D004	Arsenic	1311	5.0
D005	Barium	1311	100.0
D018	Benzene	8021B	0.5
D006	Cadmium	1311	1.0
D019	Carbon tetrachloride	8021B 8260B	0.5
D020	Chlordane	8081A	0.03
D021	Chlorobenzene	8021B 8260B	100.0
D022	Chloroform	8021B 8260B	6.0
D007	Chromium	1311	5.0
D023	o-Cresol	8270D	200.0
D024	m-Cresol	8270D	200.0
D025	p-Cresol	8270D	200.0
D026	Cresol	8270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5
D028	1,2-Dichloroethane	8021B 8260B	0.5
D029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachloroethane	8121	3.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015B 8260B	200.0

D036	Nitrobenzene	8091 8270D	2.0
D037	Pentrachlorophenol	8041	100.0
D038	Pyridine	8260B 8270D	5.0

D010	Selenium	1311	1.0
D011	Silver	1311	5.0
D039	Tetrachloroethylene	8260B	0.7
D040	Trichloroethylene	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	8270D	400.0
D042	2,4,6-Trichlorophenol	8041A 8270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If o-, m-, and p-cresol concentrations cannot be differentiated, then the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.
If the quantitation limit is greater than the regulatory level, then the quantitation limit becomes the regulatory level.
If metals (dissolved), the EPA 1311 TCLP Laboratory Method is required with the exception of Mercury (total).

ADDTIONALLY:

RCI, specific conductance, specific gravity, ORP, and general water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide) using the methods specified at 40 CFR 136.3.

February 11, 2019

Ms. Shacie Murray
Agua Moss LLC
P.O. Box 600
Farmington, New Mexico 87499

Re: Sunco Disposal #1
Injection Water Quarterly Monitoring
4th Quarter 2018

Dear Ms. Murray:

This report summarizes the sample collection, field screening, and laboratory analysis of the injection water at the Agua Moss LLC Sunco Disposal #1 well for the 4th Quarter 2018. Injection water of the Class I Sunco Disposal #1 well is assessed on a quarterly basis in accordance with 20.6.5207(B) NMAC.

Field Activities
Rule Engineering, LLC (Rule) personnel collected one injection water sample (S-8) from the process line inside the pump building at the location on January 10, 2019. Injection water was discharged directly from the valve of the process line into laboratory sample containers and a clean container for field screening.

Sample Collection and Field Screening Procedures
The injection water sample (S-8) was field screened for time sensitive parameters including pH, temperature, reduction potential, specific conductance, and total dissolved solids. Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory grade standards.

The sampled injection water was placed into laboratory supplied containers, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

Field Screening and Laboratory Analytical Results
The field screening and laboratory analytical results are summarized in the attached Table 1.

QA/QC Considerations
Field measurements for time sensitive parameters including pH, temperature, reduction potential, and specific conductance more accurately reflect the characteristics of the injection water than laboratory results for these parameters due to their rapidly changing nature when removed from the stable environment of

the process line. The hold time qualifier is indicated on the laboratory report for pH as the hold time of 15 minutes from collection was exceeded during transport prior to analysis. Similarly, the hold time was exceeded for reduction potential.

A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Rule Engineering appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-1055.

Sincerely,
Rule Engineering, LLC

Heather M. Woods, P.G.
Area Manager/Geologist

Attachments:

Table 1. Summary of Field Screening and Laboratory Analytical Results
Laboratory Analytical Reports (Hall: 1001452)

Table 1. Summary of Field Screening and Laboratory Analytical Results

Sample ID	S-8			
Collection Date	1/10/2019		Units	Toxicity Characteristic Concentrations
Analyte	Laboratory Results	Field Results		
pH	8.12 H	8.8	su	
Temperature	--	8.1	°C	
Reduction Potential	130 H	-217	mV	
Specific Conductance	9,800	4,744	µmhos/cm	
Specific Gravity	1.005	--		
Total Dissolved Solids	5.990 D	3,081	mg/L	
Bicarbonate (As $CaCO_3$)	1,131.0	--	mg/L	
Carbonate (As $CaCO_3$)	<2.000	--	mg/L	
Flouride	<0.50	--	mg/L	
Chloride	3,100	--	mg/L	
Bromide	5.8	--	mg/L	
Phosphorus, Orthophosphate	<2.5	--	mg/L	
Sulfate	57	--	mg/L	
Nitrate + Nitrite (as N)	<1.0	--	mg/L	
Calcium	130	--	mg/L	
Magnesium	16	--	mg/L	
Potassium	99	--	mg/L	
Sodium	1,900	--	mg/L	
Reactive Cyanide	<0.00500	--	mg/L	
Reactive Sulfide	0.142	--	mg/L	
Flashpoint	Did not flash at 170°F	--		
Corrosivity by pH	8.12 H	--	su	
Arsenic	0.0057	--	mg/L	5.0 mg/L
Barium	5.8	--	mg/L	100.0 mg/L
Benzene	<0.50	--	mg/L	0.5 mg/L
Cadmium	<0.0020	--	mg/L	1.0 mg/L
Carbon tetrachloride	<0.50	--	mg/L	0.5 mg/L
Chlordane	<0.15	--	mg/L	0.03 mg/L
Chlorobenzene	<100	--	mg/L	100.0 mg/L
Chloroform	<6.0	--	mg/L	6.0 mg/L
Chromium	0.11	--	mg/L	5.0 mg/L
Cresols, Total	<200	--	mg/L	200 mg/L
1,4-Dichlorobenzene	<7.5	--	mg/L	7.5 mg/L
1,2-Dichloroethane	<0.50	--	mg/L	0.5 mg/L
1,1-Dichloroethene	<0.70	--	mg/L	0.7 mg/L
2,4-Dinitroltoluene	<0.13	--	mg/L	0.13 mg/L
Hexachlorobenzene	<0.13	--	mg/L	0.13 mg/L
Hexachlorobutadiene	<0.50	--	mg/L	0.5 mg/L
Hexachloroethane	<3.0	--	mg/L	3.0 mg/L
Lead	0.0044	--	mg/L	5.0 mg/L
Mercury	0.00029	--	mg/L	0.2 mg/L
Methyl ethyl ketone	<200	--	mg/L	200.0 mg/L
Nitrobenzene	<2.0	--	mg/L	2.0 mg/L
Pentachlorophenol	<100	--	mg/L	100.0 mg/L
Pyridine	<5.0	--	mg/L	5.0 mg/L
Selenium	<0.050	--	mg/L	1.0 mg/L
Silver	<0.0050	--	mg/L	5.0 mg/L
Tetrachloroethylene	<0.70	--	mg/L	0.7 mg/L
Trichloreoethylene	<0.50	--	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	<400	--	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	<2.0	--	mg/L	2.0 mg/L
Vinyl chloride	<0.20	--	mg/L	0.2 mg/L

Notes: su - standard units
°C - degrees Celcius
°F - degrees Farenheit
mV - millivolts
µmhos/cm - micromohs per centimeter
mg/L - milligrams per liter
H - Holding times for preparation or analysis exceeded
D - Sample diluted due to matrix
S - % Recovery outside of range due to dilution or matix

1.00 Concentration exeeds the Toxicity Characteristic Concent

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

January 30, 2019

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Sunco Disposal 1 OrderNo.: 1901452

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/11/2019 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 #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: S-B (1/10/19)
Project: Sunco Disposal 1
Collection Date: 1/10/2019 1:25:00 PM
Lab ID: 1901452-001 **Matrix:** AQUEOUS **Received Date:** 1/11/2019 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP						Analyst:	**JME**
Chlordane	ND	0.15		mg/L	1	1/16/2019 3:06:50 PM	42614
Endrin	ND	0.10		mg/L	1	1/16/2019 3:06:50 PM	42614
gamma-BHC (Lindane)	ND	2.0		mg/L	1	1/16/2019 3:06:50 PM	42614
Heptachlor	ND	0.040		mg/L	1	1/16/2019 3:06:50 PM	42614
Heptachlor epoxide	ND	0.040		mg/L	1	1/16/2019 3:06:50 PM	42614
Methoxychlor	ND	50		mg/L	1	1/16/2019 3:06:50 PM	42614
Toxaphene	ND	2.5		mg/L	1	1/16/2019 3:06:50 PM	42614
Surr: Decachlorobiphenyl	39.5	47.2-117	S	%Rec	1	1/16/2019 3:06:50 PM	42614
Surr: Tetrachloro-m-xylene	39.2	26.4-126		%Rec	1	1/16/2019 3:06:50 PM	42614
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Arsenic	0.0057	0.0050		mg/L	5	1/14/2019 5:49:33 PM	A56998
Lead	0.0044	0.0025		mg/L	5	1/14/2019 5:49:33 PM	A56998
Selenium	ND	0.0050		mg/L	5	1/14/2019 5:49:33 PM	A56998
EPA METHOD 8270C TCLP						Analyst:	**DAM**
2-Methylphenol	ND	200		mg/L	1	1/23/2019 7:47:25 PM	42656
3+4-Methylphenol	ND	200		mg/L	1	1/23/2019 7:47:25 PM	42656
2,4-Dinitrotoluene	ND	0.13		mg/L	1	1/23/2019 7:47:25 PM	42656
Hexachlorobenzene	ND	0.13		mg/L	1	1/23/2019 7:47:25 PM	42656
Hexachlorobutadiene	ND	0.50		mg/L	1	1/23/2019 7:47:25 PM	42656
Hexachloroethane	ND	3.0		mg/L	1	1/23/2019 7:47:25 PM	42656
Nitrobenzene	ND	2.0		mg/L	1	1/23/2019 7:47:25 PM	42656
Pentachlorophenol	ND	100		mg/L	1	1/23/2019 7:47:25 PM	42656
Pyridine	ND	5.0		mg/L	1	1/23/2019 7:47:25 PM	42656
2,4,5-Trichlorophenol	ND	400		mg/L	1	1/23/2019 7:47:25 PM	42656
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	1/23/2019 7:47:25 PM	42656
Cresols, Total	ND	200		mg/L	1	1/23/2019 7:47:25 PM	42656
Surr: 2-Fluorophenol	45.2	15-82.5		%Rec	1	1/23/2019 7:47:25 PM	42656
Surr: Phenol-d5	42.1	15-74.2		%Rec	1	1/23/2019 7:47:25 PM	42656
Surr: 2,4,6-Tribromophenol	67.5	18.6-118		%Rec	1	1/23/2019 7:47:25 PM	42656
Surr: Nitrobenzene-d5	68.0	30.4-106		%Rec	1	1/23/2019 7:47:25 PM	42656
Surr: 2-Fluorobiphenyl	56.6	15-104		%Rec	1	1/23/2019 7:47:25 PM	42656
Surr: 4-Terphenyl-d14	65.7	15-133		%Rec	1	1/23/2019 7:47:25 PM	42656
SPECIFIC GRAVITY						Analyst:	**JRR**
Specific Gravity	1.005	0			1	1/25/2019 9:32:00 AM	R57253
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	1/11/2019 5:32:37 PM	R56974
Chloride	3100	100		mg/L	200	1/22/2019 10:31:02 PM	A57182

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: Rule Engineering LLC
Client Sample ID: S-B (1/10/19)
Project: Sunco Disposal 1
Collection Date: 1/10/2019 1:25:00 PM
Lab ID: 1901452-001 **Matrix:** AQUEOUS **Received Date:** 1/11/2019 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Nitrogen, Nitrite (As N)	11	2.0	*	mg/L	20	1/11/2019 5:45:29 PM	R56974
Bromide	5.8	0.50		mg/L	5	1/11/2019 5:32:37 PM	R56974
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/11/2019 5:32:37 PM	R56974
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	1/11/2019 5:32:37 PM	R56974
Sulfate	57	2.5		mg/L	5	1/11/2019 5:32:37 PM	R56974
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	9800	5.0		µmhos/c	1	1/14/2019 4:56:44 PM	R56972
SM2320B: ALKALINITY						Analyst: **JRR**	
Bicarbonate (As CaCO3)	1131	20.00		mg/L Ca	1	1/14/2019 4:56:44 PM	R56972
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	1/14/2019 4:56:44 PM	R56972
Total Alkalinity (as CaCO3)	1131	20.00		mg/L Ca	1	1/14/2019 4:56:44 PM	R56972
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5990	100	*D	mg/L	1	1/15/2019 7:00:00 PM	42597
SM4500-H+B / 9040C: PH						Analyst: **JRR**	
pH	8.12		H	pH units	1	1/14/2019 4:56:44 PM	R56972
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **bcv**	
Barium	3.5	0.010	*	mg/L	5	1/17/2019 12:56:14 PM	A57088
Cadmium	ND	0.0020		mg/L	1	1/17/2019 1:53:23 PM	A57088
Calcium	130	5.0		mg/L	5	1/17/2019 12:56:14 PM	A57088
Chromium	0.11	0.0060	*	mg/L	1	1/17/2019 1:53:23 PM	A57088
Magnesium	16	1.0		mg/L	1	1/17/2019 1:53:23 PM	A57088
Potassium	99	1.0		mg/L	1	1/17/2019 1:53:23 PM	A57088
Silver	ND	0.0050		mg/L	1	1/17/2019 1:53:23 PM	A57088
Sodium	1900	20		mg/L	20	1/17/2019 12:58:06 PM	A57088
EPA METHOD 245.1: MERCURY						Analyst: **pmf**	
Mercury	0.00029	0.00020		mg/L	1	1/16/2019 12:38:18 PM	42598
TCLP VOLATILES BY 8260B						Analyst: **DJF**	
Benzene	ND	0.50		mg/L	200	1/17/2019 11:32:09 AM	B57086
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	1/17/2019 11:32:09 AM	B57086
2-Butanone	ND	200		mg/L	200	1/17/2019 11:32:09 AM	B57086
Carbon Tetrachloride	ND	0.50		mg/L	200	1/17/2019 11:32:09 AM	B57086
Chloroform	ND	6.0		mg/L	200	1/17/2019 11:32:09 AM	B57086
1,4-Dichlorobenzene	ND	7.5		mg/L	200	1/17/2019 11:32:09 AM	B57086
1,1-Dichloroethene	ND	0.70		mg/L	200	1/17/2019 11:32:09 AM	B57086
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	1/17/2019 11:32:09 AM	B57086
Trichloroethene (TCE)	ND	0.50		mg/L	200	1/17/2019 11:32:09 AM	B57086

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: S-B (1/10/19)
Project: Sunco Disposal 1
Collection Date: 1/10/2019 1:25:00 PM
Lab ID: 1901452-001 **Matrix:** AQUEOUS **Received Date:** 1/11/2019 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
TCLP VOLATILES BY 8260B						Analyst: **DJF**	
Vinyl chloride	ND	0.20		mg/L	200	1/17/2019 11:32:09 AM	B57086
Chlorobenzene	ND	100		mg/L	200	1/17/2019 11:32:09 AM	B57086
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	200	1/17/2019 11:32:09 AM	B57086
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	200	1/17/2019 11:32:09 AM	B57086
Surr: Dibromofluoromethane	102	70-130		%Rec	200	1/17/2019 11:32:09 AM	B57086
Surr: Toluene-d8	110	70-130		%Rec	200	1/17/2019 11:32:09 AM	B57086

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

Qualifiers:

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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

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	mV			date / time	
ORP	130	T8	1	01/17/2019 17:39	WG1225059

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	ND		0.00500	1	01/16/2019 20:48	WG1224104

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.142		0.0500	1	01/16/2019 17:42	WG1224373

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF at 170		1	01/23/2019 16:15	WG1227424

L1061047-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1061047-01 01/17/19 17:39 • (DUP) R3376708-2 01/17/19 17:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mV	mV		%		%
ORP	130	126	1	3.13		20

Laboratory Control Sample (LCS)

(LCS) R3376708-1 01/17/19 17:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mV	mV	%	%	
ORP	228	228	100	95.7-104	

Method Blank (MB)

(MB) R3376383-1 01/16/19 20:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3376383-2 01/16/19 20:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.0945	94.5	85.0-115	

Method Blank (MB)

(MB) R3376363-1 01/16/19 17:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3376363-2 01/16/19 17:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.520	104	85.0-115	

L1061047-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1061047-01 01/23/19 16:15 • (DUP) R3378094-2 01/23/19 16:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3378094-1 01/23/19 16:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	deg F	deg F	%	%	
Flashpoint	82.0	82.1	100	96.0-104	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57088**	RunNo: **57088**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57088**	RunNo: **57088**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	82.3	50	150			
Cadmium	ND	0.0020	0.002000	0	79.2	50	150			
Calcium	ND	1.0	0.5000	0	101	50	150			
Chromium	ND	0.0060	0.006000	0	95.5	50	150			
Magnesium	ND	1.0	0.5000	0	100	50	150			
Potassium	ND	1.0	0.5000	0	103	50	150			
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Sodium	ND	1.0	0.5000	0	111	50	150			

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57088**	RunNo: **57088**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	49	1.0	50.00	0	98.8	85	115			
Chromium	0.48	0.0060	0.5000	0	95.8	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	99.6	85	115			
Sodium	51	1.0	50.00	0	101	85	115			

Qualifiers:

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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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A56998**	RunNo:	**56998**					
Prep Date:		Analysis Date:	**1/14/2019**	SeqNo:	**1906715**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A56998**	RunNo:	**56998**					
Prep Date:		Analysis Date:	**1/14/2019**	SeqNo:	**1906716**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.4	85	115			

Sample ID	**MSLLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A56998**	RunNo:	**56998**					
Prep Date:		Analysis Date:	**1/14/2019**	SeqNo:	**1906787**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	98.3	50	150			
Lead	ND	0.00050	0.0005000	0	99.5	50	150			
Selenium	ND	0.0010	0.001000	0	91.6	50	150			

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID	**MB-42598**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**				
Client ID:	**PBW**	Batch ID:	**42598**	RunNo:	**57037**				
Prep Date:	**1/14/2019**	Analysis Date:	**1/15/2019**	SeqNo:	**1908021**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-42598**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**				
Client ID:	**LCSW**	Batch ID:	**42598**	RunNo:	**57037**				
Prep Date:	**1/14/2019**	Analysis Date:	**1/15/2019**	SeqNo:	**1908022**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.9	80	120			

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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R56974**	RunNo: **56974**
Prep Date:	Analysis Date: **1/11/2019**	SeqNo: **1905838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R56974**	RunNo: **56974**
Prep Date:	Analysis Date: **1/11/2019**	SeqNo: **1905839** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.9	90	110			
Bromide	2.4	0.10	2.500	0	96.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.8	0.50	10.00	0	98.3	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A57182**	RunNo: **57182**
Prep Date:	Analysis Date: **1/22/2019**	SeqNo: **1912867** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A57182**	RunNo: **57182**
Prep Date:	Analysis Date: **1/22/2019**	SeqNo: **1912868** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			

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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID **rb**	SampType: **MBLK**	TestCode: **TCLP Volatiles by 8260B**
Client ID: **PBW**	Batch ID: **B57086**	RunNo: **57086**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.0025								
1,2-Dichloroethane (EDC)	ND	0.0025								
2-Butanone	ND	1.0								
Carbon Tetrachloride	ND	0.0025								
Chloroform	ND	0.030								
1,4-Dichlorobenzene	ND	0.038								
1,1-Dichloroethene	ND	0.0035								
Tetrachloroethene (PCE)	ND	0.0035								
Trichloroethene (TCE)	ND	0.0025								
Vinyl chloride	ND	0.0010								
Chlorobenzene	ND	0.50								
Surr: 1,2-Dichloroethane-d4	0.010		0.01000		104	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		103	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		102	70	130			
Surr: Toluene-d8	0.011		0.01000		107	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **TCLP Volatiles by 8260B**
Client ID: **LCSW**	Batch ID: **B57086**	RunNo: **57086**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.017	0.0025	0.02000	0	86.7	70	130			
1,1-Dichloroethene	0.019	0.0025	0.02000	0	92.6	70	130			
Trichloroethene (TCE)	0.016	0.0025	0.02000	0	82.3	70	130			
Chlorobenzene	0.019	0.0025	0.02000	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.010		0.01000		105	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		105	70	130			
Surr: Toluene-d8	0.010		0.01000		105	70	130			

Sample ID **1901452-001a ms**	SampType: **MS**	TestCode: **TCLP Volatiles by 8260B**
Client ID: **S-B (1/10/19)**	Batch ID: **B57086**	RunNo: **57086**
Prep Date:	Analysis Date: **1/17/2019**	SeqNo: **1909284** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.6	0.50	4.000	0.1851	85.7	70	130			
1,1-Dichloroethene	3.6	0.70	4.000	0	89.7	67.6	130			
Trichloroethene (TCE)	3.2	0.50	4.000	0	81.2	70	130			
Chlorobenzene	ND	100	4.000	0	99.4	70	130			
Surr: 1,2-Dichloroethane-d4	2.0		2.000		99.7	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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID	**1901452-001a ms**	SampType:	**MS**		TestCode:	**TCLP Volatiles by 8260B**				
Client ID:	**S-B (1/10/19)**	Batch ID:	**B57086**		RunNo:	**57086**				
Prep Date:		Analysis Date:	**1/17/2019**		SeqNo:	**1909284**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2.1		2.000		104	70	130			
Surr: Dibromofluoromethane	1.9		2.000		95.7	70	130			
Surr: Toluene-d8	2.2		2.000		110	70	130			

Sample ID	**1901452-001a msd**	SampType:	**MSD**		TestCode:	**TCLP Volatiles by 8260B**				
Client ID:	**S-B (1/10/19)**	Batch ID:	**B57086**		RunNo:	**57086**				
Prep Date:		Analysis Date:	**1/17/2019**		SeqNo:	**1909285**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.5	0.50	4.000	0.1851	83.7	70	130	2.19	20	
1,1-Dichloroethene	3.6	0.70	4.000	0	89.8	67.6	130	0.160	20	
Trichloroethene (TCE)	3.1	0.50	4.000	0	78.5	70	130	3.29	20	
Chlorobenzene	ND	100	4.000	0	97.2	70	130	0	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		100	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.1		2.000		104	70	130	0	0	
Surr: Dibromofluoromethane	2.0		2.000		98.1	70	130	0	0	
Surr: Toluene-d8	2.2		2.000		109	70	130	0	0	

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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID **1901452-001cms**	SampType: **MS**	TestCode: **EPA Method 8270C TCLP**
Client ID: **S-B (1/10/19)**	Batch ID: **42656**	RunNo: **57209**
Prep Date: **1/17/2019**	Analysis Date: **1/23/2019**	SeqNo: **1913816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.055	0.0010	0.1000	0	54.7	23.9	129			
3+4-Methylphenol	0.14	0.0010	0.2000	0.01730	60.1	15	167			
2,4-Dinitrotoluene	0.063	0.0010	0.1000	0	62.5	15	147			
Hexachlorobenzene	0.074	0.0010	0.1000	0	74.1	41.4	136			
Hexachlorobutadiene	0.042	0.0010	0.1000	0	42.3	16.2	134			
Hexachloroethane	0.036	0.0010	0.1000	0	36.4	20.6	124			
Nitrobenzene	0.065	0.0010	0.1000	0	65.5	39.5	134			
Pentachlorophenol	0.069	0.0010	0.1000	0	69.0	15	137			
Pyridine	0.014	0.0010	0.1000	0	14.3	15	129			S
2,4,5-Trichlorophenol	0.069	0.0010	0.1000	0	69.2	15	158			
2,4,6-Trichlorophenol	0.074	0.0010	0.1000	0	74.3	15	153			
Cresols, Total	0.20	0.0010	0.3000	0.02740	58.0	10.6	179			
Surr: 2-Fluorophenol	0.095		0.2000		47.7	15	82.5			
Surr: Phenol-d5	0.090		0.2000		44.8	15	74.2			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		80.0	18.6	118			
Surr: Nitrobenzene-d5	0.071		0.1000		71.5	30.4	106			
Surr: 2-Fluorobiphenyl	0.066		0.1000		66.0	15	104			
Surr: 4-Terphenyl-d14	0.076		0.1000		76.4	15	133			

Sample ID **1901452-001cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C TCLP**
Client ID: **S-B (1/10/19)**	Batch ID: **42656**	RunNo: **57209**
Prep Date: **1/17/2019**	Analysis Date: **1/23/2019**	SeqNo: **1913817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.040	0.0010	0.1000	0	40.4	23.9	129	30.0	20	R
3+4-Methylphenol	0.098	0.0010	0.2000	0.01730	40.3	15	167	33.7	20	R
2,4-Dinitrotoluene	0.047	0.0010	0.1000	0	46.5	15	147	29.3	23.2	R
Hexachlorobenzene	0.054	0.0010	0.1000	0	54.4	41.4	136	30.7	20	R
Hexachlorobutadiene	0.035	0.0010	0.1000	0	34.5	16.2	134	20.2	20	R
Hexachloroethane	0.030	0.0010	0.1000	0	29.7	20.6	124	20.4	31.3	
Nitrobenzene	0.053	0.0010	0.1000	0	52.7	39.5	134	21.6	26.6	
Pentachlorophenol	0.051	0.0010	0.1000	0	51.2	15	137	29.7	27.9	R
Pyridine	0.0076	0.0010	0.1000	0	7.64	15	129	60.6	47.4	RS
2,4,5-Trichlorophenol	0.051	0.0010	0.1000	0	50.7	15	158	30.9	36.9	
2,4,6-Trichlorophenol	0.057	0.0010	0.1000	0	56.9	15	153	26.5	37.2	
Cresols, Total	0.15	0.0010	0.3000	0.02740	39.4	10.6	179	32.2	27.4	R
Surr: 2-Fluorophenol	0.071		0.2000		35.5	15	82.5	0	0	
Surr: Phenol-d5	0.066		0.2000		33.1	15	74.2	0	0	
Surr: 2,4,6-Tribromophenol	0.12		0.2000		60.2	18.6	118	0	0	

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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID	**1901452-001cmsd**	SampType:	**MSD**	TestCode:	**EPA Method 8270C TCLP**					
Client ID:	**S-B (1/10/19)**	Batch ID:	**42656**	RunNo:	**57209**					
Prep Date:	**1/17/2019**	Analysis Date:	**1/23/2019**	SeqNo:	**1913817**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.054		0.1000		53.7	30.4	106	0	0	
Surr: 2-Fluorobiphenyl	0.052		0.1000		52.0	15	104	0	0	
Surr: 4-Terphenyl-d14	0.070		0.1000		69.6	15	133	0	0	

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#: **1901452**
30-Jan-19

Client: Rule Engineering LLC
Project: Sunco Disposal 1

Sample ID	**lcs-1 99.0uS eC**	SampType: **LCS**		TestCode: **SM2510B: Specific Conductance**						
Client ID:	**LCSW**	Batch ID: **R56972**		RunNo: **56972**						
Prep Date:		Analysis Date: **1/14/2019**		SeqNo: **1906477**		Units: **µmhos/cm**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		98	5.0	99.00	0	99.2	80	120			

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#: **1901452**

30-Jan-19

Client: Rule Engineering LLC

Project: Sunco Disposal 1

Sample ID	**mb-1 alk**	SampType:	**MBLK**	TestCode:	**SM2320B: Alkalinity**					
Client ID:	**PBW**	Batch ID:	**R56972**	RunNo:	**56972**					
Prep Date:		Analysis Date:	**1/14/2019**	SeqNo:	**1906492**	Units:	**mg/L CaCO3**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID	**lcs-1 alk**	SampType:	**LCS**	TestCode:	**SM2320B: Alkalinity**					
Client ID:	**LCSW**	Batch ID:	**R56972**	RunNo:	**56972**					
Prep Date:		Analysis Date:	**1/14/2019**	SeqNo:	**1906493**	Units:	**mg/L CaCO3**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	81.24	20.00	80.00	0	102	90	110			

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#: **1901452**
30-Jan-19

Client: Rule Engineering LLC
Project: Sunco Disposal 1

Sample ID	**MB-42597**	SampType:	**MBLK**		TestCode:	**SM2540C MOD: Total Dissolved Solids**				
Client ID:	**PBW**	Batch ID:	**42597**		RunNo:	**57014**				
Prep Date:	**1/14/2019**	Analysis Date:	**1/15/2019**		SeqNo:	**1907232**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-42597**	SampType:	**LCS**		TestCode:	**SM2540C MOD: Total Dissolved Solids**				
Client ID:	**LCSW**	Batch ID:	**42597**		RunNo:	**57014**				
Prep Date:	**1/14/2019**	Analysis Date:	**1/15/2019**		SeqNo:	**1907233**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

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: RULE ENGINEERING LL Work Order Number: 1901452 RcptNo: 1

Received By: **Desiree Dominguez** 1/11/2019 8:05:00 AM DD

Completed By: **Anne Thorne** 1/11/2019 1:48:23 PM Anne Thorne

Reviewed By: DAD 1/11/19

Labeled by: JO 1/11/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 3, 2 (<2 or >12 unless noted)

Adjusted? YES

Checked by: JO 1/11/19

Special Handling (if applicable)

15. 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:

16. Additional remarks: For metals analysis: added approx 2ml HNO_3 to sample -0010 for acceptable pH level. Held 24 hour prior analysis - JO 1/11/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering

Mailing Address: 501 Airport Dr. Ste 205
Farmington, NM 87401

Phone #: (505) 716-2787

email or Fax#: hwoods@ruleengineering.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Sunco Disposal #1

Project #:

Project Manager: Heather Woods

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.3

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. 1901452	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	See Attached				Air Bubbles (Y or N)
1/10/19	1325	Water	S-B(1/10/19)	(1)500mL Plastic	HNO_3	001												X				
				(1)500mL Plastic	NaOH	002																
				(1)500mL Plastic	Zinc Acetate / NaOH	003																
				(2)500mL Plastic	Non	004																
				(1)125mL Plastic	H_2SO_4	005																
				(1)125mL Plastic	HNO_3 Filtered	006																
				(5)1L AmberGlass	Non	007																
				(3)40mL VOA	HCl	008																

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/10/19	1740	Heather M. Woods		1/10/19	1740
1/10/19	1827		TDS	1/11/19	8:05

Courier

Remarks:
Direct Bill to Agua Moss - Rates per Andy
See Attached (2 pages)

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.

Characteristic of toxicity using the Toxicity Characteristic Leaching Procedure, EPA SW-846 Test Method 1311 (see Table 1, 40 CFR 261.24(b)).

QUARTERLY MONITORING LIST			
EPA HW No.	**Contaminant**	**SW-846 Methods**	**Regulatory Level (mg/L)**
D004	Arsenic	1311	5.0
D005	Barium	1311	100.0
D018	Benzene	8021B	0.5
D006	Cadmium	1311	1.0
D019	Carbon tetrachloride	8021B 8260B	0.5
D020	Chlordane	8081A	0.03
D021	Chlorobenzene	8021B 8260B	100.0
D022	Chloroform	8021B 8260B	6.0
D007	Chromium	1311	5.0
D023	o-Cresol	8270D	200.0
D024	m-Cresol	8270D	200.0
D025	p-Cresol	8270D	200.0
D026	Cresol	8270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5
D028	1,2-Dichloroethane	8021B 8260B	0.5
D029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachloroethane	8121	3.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015B 8260B	200.0

D036	Nitrobenzene	8091 8270D	2.0
D037	Pentrachlorophenol	8041	100.0
D038	Pyridine	8260B 8270D	5.0

D010	Selenium	1311	1.0
D011	Silver	1311	5.0
D039	Tetrachloroethylene	8260B	0.7
D040	Trichloroethylene	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	8270D	400.0
D042	2,4,6-Trichlorophenol	8041A 8270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If o-, m-, and p-cresol concentrations cannot be differentiated, then the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.
If the quantitation limit is greater than the regulatory level, then the quantitation limit becomes the regulatory level.
If metals (dissolved), the EPA 1311 TCLP Laboratory Method is required with the exception of Mercury (total).

ADDTIONALLY:

RCl, specific conductance, specific gravity, ORP, and general water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide) using the methods specified at 40 CFR 136.3.

Appendix C

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3distric.htm

NMOCD

APR 13 2018

DISTRICT III

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 4-3-2018 Operator Agua Moss API #30-0 45-28653

Property Name Sunco Disposal Well No. 1 Location: Unit E Section 2 Township 29 Range 12

Well Status (Shut-In or ~~Producing~~) Initial PSI: Tubing 1402 Intermediate NA Casing Ø Bradenhead Ø

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME 5 min	Ø	NA	Ø		
10 min	Ø		Ø		
15 min	Ø		Ø		
20 min	Ø		Ø		
25 min	Ø		Ø		
30 min	Ø		Ø		

FLOW CHARACTERISTICS

	BRADENHEAD	INTERMEDIATE
Steady Flow		
Surges		
Down to Nothing		
Nothing - Vac		
Gas		
Gas & Water		
Water		

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR_____ FRESH_____ SALTY_____ SULFUR_____ BLACK_____

5 MINUTE SHUT-IN PRESSURE BRADENHEAD Ø INTERMEDIATE NA

REMARKS:

BH had slight vac. when opened. Nothing on BH after 5 min shut in.

By _____

Manager
(Position)

Witness _____ NMOCD

E-mail address _____

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(~~TA~~ OR UIC)

Date of Test 4-3-2018 Operator Agua Moss API # 30-0 45-28653

Property Name Sunco Disposal Well # 1 Location: Unit E Sec 2 Twn 29 Rge 12

Land Type:
State ____
Federal ____
Private X
Indian ____

NMOCD
APR 03 2018
DISTRICT III

Well Type:
Water Injection ____
Salt Water Disposal X
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (~~Y~~/N): Post workover TA Expires: /

Casing Pres. 0 Tbg. SI Pres. ____ Max. Inj. Pres. 2450 psi.
Bradenhead Pres. 0 Tbg. Inj. Pres. ____
Tubing Pres. 1400 psi
Int. Casing Pres. NA

Pressured annulus up to 350 psi. for 30 mins. Test passed/failed

REMARKS: Pressured up to 350 psi - had a slight rise to 360psi in first 5 min - Had rose to aprox 380psi by end of test - possibly due to hoses warming in sun.

PKR set at: 4282 Perfs at: 4350 (Top) - 4460 (Bottom) (Thirdock 1000# spring last cal. 6-21-17)

By _____ Witness _____
(Operator Representative) (NMOCD)

Manager
(Position)

Revised 02-11-02

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

NMOCD

JUL 16 2018

DISTRICT III

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 7-16-18 Operator AguaMoss LLC API # 30-0 45 28653

Property Name Sunco Disposal Well # 1 Location: Unit ___ Sec 2 Twn 29 Rge 12

Land Type:
State ____
Federal ____
Private ____
Indian ____

Well Type:
Water Injection ____
Salt Water Disposal /
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (Y/N): ____ TA Expires: ____

Casing Pres. ____ Tbg. SI Pres. ____ Max. Inj. Pres. ____
Bradenhead Pres. 0 - Vacuum Tbg. Inj. Pres. ____
Tubing Pres. ____
Int. Casing Pres. N/A

Pressured annulus up to 1050 psi. for 30 mins. Test passed/failed

REMARKS:

5000 lbs Spring - Calibrated 12-21-17 San Juan Measurement LLC
Casing 875 before Starting. BH - 0 - tubing - 1450
31 day Chart - Started at 875. Pressured to ~1050 for
30 minutes then bled back to starting point.

On site to witness only - Approval determined from Santa Fe

By Ryan Mann (Operator Representative) Witness N Lowe Kuehling (NMOCD)

(Position)

Revised 02-11-02

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 7-26-18 Operator Agua Moss LLC API # 30-0 45-28653

Property Name SunCo Disposal Well # 1 Location: Unit E Sec 2 Twn 29 Rge 12

Land Type:
State ____
Federal ____
Private /
Indian ____

NMOCD
JUL 26 2018
DISTRICT III

Well Type:
Water Injection ____
Salt Water Disposal /
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (Y/N): ____ TA Expires: ____

Casing Pres. 495
Bradenhead Pres. ____
Tubing Pres. 1500
Int. Casing Pres. N/A

Tbg. SI Pres. ____
Tbg. Inj. Pres. ____

Max. Inj. Pres. ____

Pressured annulus up to 1038 psi. for 30 mins. Test passed/failed

REMARKS:

Bled Casing down to 0 At Start
Pressured to 1038,
dropped to 1020 & held

Santa Fe determines pursuant NE witnessing

By _____ Witness Monica Kuehling
(Operator Representative) (NMOCD)

Manager AM
(Position)

Revised 02-11-02

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 9-27-18 Operator AguaMoss LLC API # 30-0 45-28653

Property Name Sunco Disp. Well # 1 Location: Unit ___ Sec 2 Twn 29 Rge 12

Land Type:
State ___
Federal ___
Private ✓
Indian ___

NMOCD
AUG 28 2018
DISTRICT III

Well Type:
Water Injection ___
Salt Water Disposal ✓
Gas Injection ___
Producing Oil/Gas ___
Pressure obervation ___

Temporarily Abandoned Well (Y/N): ___ TA Expires: ___

Casing Pres. 0
Bradenhead Pres. 0
Tubing Pres. 1650
Int. Casing Pres. NA

Tbg. SI Pres. ___
Tbg. Inj. Pres. ___

Max. Inj. Pres. ___

Pressured annulus up to 1010 psi. for 30 mins. Test passed/failed

REMARKS:

Casing Pressure at 850 when arrived - bled to 0 - 10 gallons fluid

Pressured to 1010 - dropped to 1002 and held - tubing at 1650 - bled casing to zero -

Pass or fail determined by Statute of Office -

By ___ Witness Monica Kuehling
(Operator Representative) (NMOCD)

___
(Position)

Revised 02-11-02

UIC - I - ___5____

MECHANICAL INTEGRITY TEST (MITs)

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OCT 25 2018 PM01:58

MECHANICAL INTEGRITY TEST REPORT
(TA OR UIC)

Date of Test 10-3-18 Operator AguaMoss LLC API # 30-0 45-28653

Property Name Sunco Disposal Well # 1 Location: Unit ___ Sec 2 Twn 29 Rge 12

Land Type:
State ____
Federal ____
Private ✓
Indian ____

Well Type:
Water Injection ____
Salt Water Disposal ✓
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (Y/N): ____ TA Expires: ____

Casing Pres. 800 Tbg. SI Pres. ____ Max. Inj. Pres. ____
Bradenhead Pres. 0 Tbg. Inj. Pres. ____
Tubing Pres. 1300
Int. Casing Pres. N/A

Pressured annulus up to 1040 psi. for 30 mins. Test passed/failed

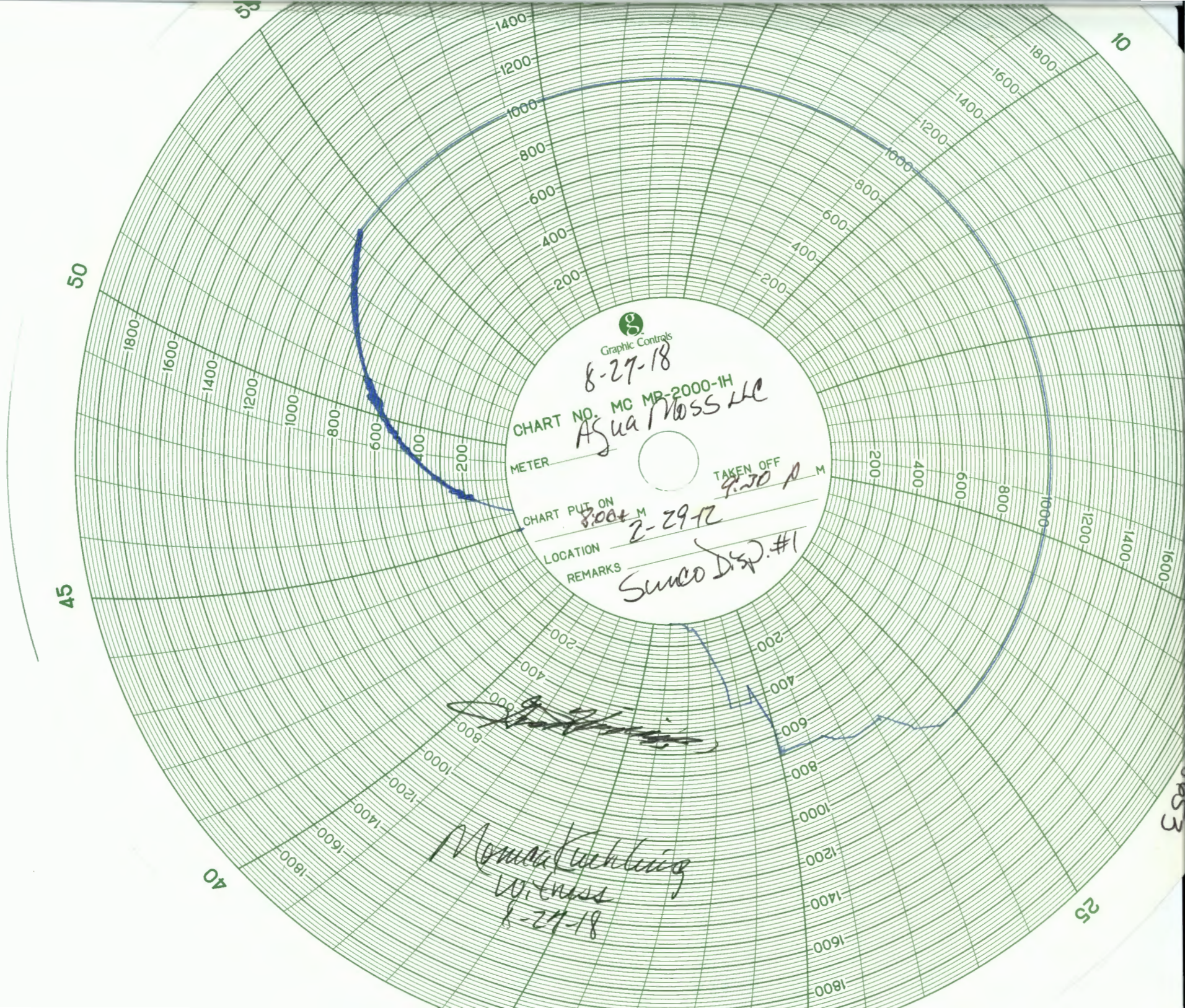
REMARKS:
Class I - MIT Prior to start injection for falloff test
Bled casing to 0 Prior to MIT
BH-0- during whole test
Approval Comes from Santa Fe Office

By _____ Witness Monica Kuehling
(Operator Representative) (NMOCD)

Manager
(Position)

Revised 02-11-02

40
35
30
25
20
15
10
5
1800
1600
1400
1200
1000
800
600
400
200
PRINTED IN U.S.A.
CHART NO. MC MP-2000-1H
Graphic Controls
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF
Shutdown
Shut
30-045-28663
Dugan Production Corp.
Navajo Dam Unit #3


Graphic Controls
8-27-18
CHART NO. MC MP-2000-1H
METER Agua Moss LLC
CHART PUT ON 8:00A M
TAKEN OFF 4:30 P M
LOCATION 2-29-12
REMARKS Sunco Disp. #1
Monica Kuehling
Witness
8-27-18

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, July 26, 2018 3:08 PM
To: 'Philana Thompson'; Ryan Davis (rdavis@merrion.bz); Ryan Merrion (ryan@merrion.bz)
Cc: Sanchez, Daniel J., EMNRD; Goetze, Phillip, EMNRD; Griswold, Jim, EMNRD; Powell, Brandon, EMNRD; Kuehling, Monica, EMNRD
Subject: UICI-005 UIC Class I (NH) SUNCO Well No. 1 (API# 30-045-28653) Disposal Well Agua Moss, LLC MIT Chart 7-26-2018
Attachments: 2018-07-26 Sunco MIT Packet.pdf

Philana, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the above subject well Static Annulus MIT conducted this morning.

OCD hereby **approves** the MIT.

Agua Moss, LLC may **resume** operations at its earliest convenience.

Thank you for your cooperation in this matter.

Mr. Carl J. Chavez, CHMM (#13099)
UIC Program Quality Assurance Officer
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

From: Philana Thompson <pthompson@merrion.bz>
Sent: Thursday, July 26, 2018 11:30 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: Fwd: Sunco MIT Chart

Philana Thompson
Merrion Oil & Gas
Sent from my iPhone

Begin forwarded message:

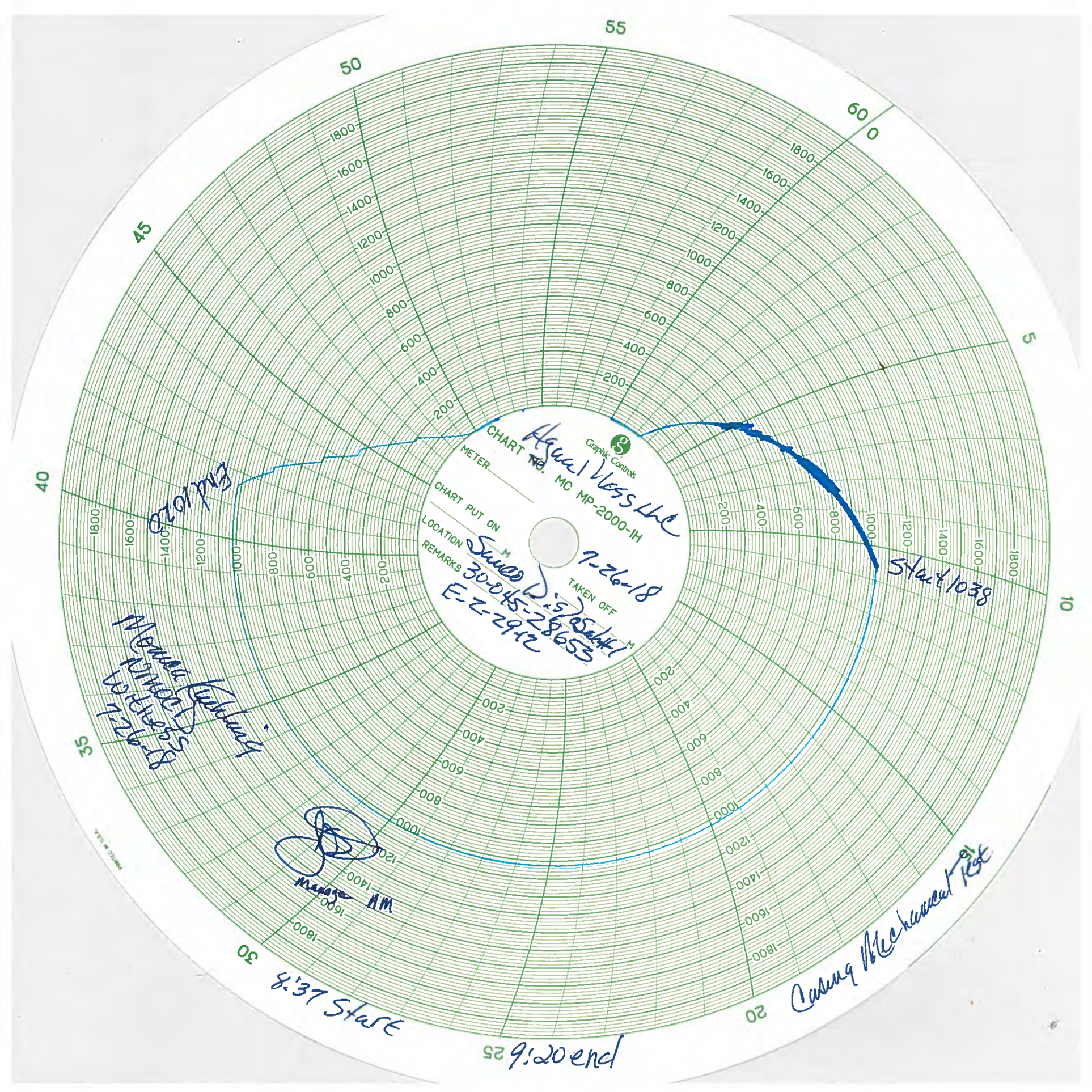
> **From:** Shacie Murray <shacie@merrion.bz>
> **Date:** July 26, 2018 at 11:14:54 AM MDT

To: Philana Thompson <pthompson@merrion.bz>
Subject: Sunco MIT Chart

Attached.

Shacie Murray

Merrion Oil & Gas
Production Engineer
(505) 330-7605
shacie@merrion.bz


Graphic Controls
CHART NO. MC MP-2000-1H
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF
Agua Moss LLC
7-26-18
Sunco 2 #5
30-045-28655
E-2-29N-12W
Static 1038
Casing Bleed down
Normal Pressure
Monica Kuehling
7-27-18
8:37 Start
9:20 end
Manager AM

JADE SALES & SERVICE, INC.

(505) 325-6173

CONTENT AND METER REPORT

GAS FROM

STA NO.

~~LEASE~~ MERRION OIL + GAS SYSTEM

LEGAL DESCR.

GAS TO

DATE OF TEST 7/25/18 TIME OF TEST 0800 EFFECTIVE DATE 7/25/18

METER DATA		RECORDER DATA	AP CALIBRATION			
TYPE CONNECTION / FLG ☐0 / PIPE ☐1		FLOW COMPUTER ☐	APP D W	ATMOS D W	FOUND	LEFT
METER TUBE SIZE	▲	RECORDER S/N OR MFG: BARTON	0			0
ORIFICE INSTALLED	▲	~~DIFF~~ RANGE: S/N-202A-195391	400			400
ORIFICE REMOVED	▲	STATIC RANGE 2000#	1000			1000
ORIFICE S/N	▲	TEMP RANGE	1600			1600
AV DIFF		AV STATIC	2000			2000
SAMPLE TAKEN YES ☐ NO ☐		TYPE OF TEST CHECK ☐ SETTLE ☐ ORIFICE ☐	0			0

TESTER AARON ESTRADA

SCH #

WITNESS

DP CALIBRATION		
APP DW	FOUND	LEFT

REMARKS —

BARTON - 1-PEN-2000# RECORDER.

TEST SOURCE: BETA

0-3000# S/N: 3247007

CERTIFICATION DATE: 3/26/18

TEMP CALIBRATION		
THERM	FOUND	LEFT



MESA
MEASUREMENT

Certificate of Calibration
13197

Calibration Data

Range :	0 to 3000 PSIG (HP Transducer)
Stated Accuracy :	+/- 0.025% of Full Scale

Standard :	PM600-A20M
Serial No.:	3247007

Step	Reference's Indicated Value	As Found Calibrator's Reading	As Left Calibrator's Reading	Acceptance Minimum	Limits Maximum
1	0.00	0.0	Left, As Found	-0.4	0.4
2	3000.00	2999.6	Left, As Found	2999.2	3000.8
3	2700.00	2699.7	Left, As Found	2699.2	2700.8
4	2400.00	2399.7	Left, As Found	2399.2	2400.8
5	2100.00	2099.7	Left, As Found	2099.2	2100.8
6	1800.00	1799.9	Left, As Found	1799.2	1800.8
7	1500.00	1500.0	Left, As Found	1499.2	1500.8
8	1200.00	1199.9	Left, As Found	1199.2	1200.8
9	900.00	900.0	Left, As Found	899.2	900.8
10	600.00	600.0	Left, As Found	599.2	600.8
11	300.00	300.0	Left, As Found	299.2	300.8
12	0.00	0.0	Left, As Found	-0.4	0.4

Range :	0 to 30 Volts DC
Stated Accuracy :	+/- 0.015% of Reading + 0.002V

Standard :	M3001
Serial No.:	9499092

Step	Reference's Indicated Value	As Found Calibrator's Reading	As Left Calibrator's Reading	Acceptance Minimum	Limits Maximum
1	0.000	0.000	Left, As Found	-0.002	0.002
2	15.000	15.000	Left, As Found	14.996	15.004
3	30.000	30.000	Left, As Found	29.993	30.007

Range :	4 to 20 mA DC Current
Stated Accuracy :	+/- 0.015% of Reading + 0.002mA

Standard :	M3001
Serial No.:	9499092

Step	Reference's Indicated Value	As Found Calibrator's Reading	As Left Calibrator's Reading	Acceptance Minimum	Limits Maximum
1	4.000	FAILED	Left, As Found	3.997	4.003
2	12.000	FAILED	Left, As Found	11.996	12.004
3	20.000	FAILED	Left, As Found	19.995	20.005

Range :	25° Fahrenheit to 200° Fahrenheit
Stated Accuracy :	+/- 0.2° F (0.1°C)

Standard :	RTD-100
Serial No.:	2915

Step	Reference's Indicated Value	As Found Calibrator's Reading	As Left Calibrator's Reading	Acceptance Minimum	Limits Maximum
1	25.00	*24.71	25.05	24.80	25.20
2	100.00	*99.6	100.04	99.80	100.20
3	200.00	*199.45	200.03	199.80	200.20

* Indicates "Out of Tolerance"

MESA
MEASUREMENT

Certificate of Calibration
13197

Customer Information

Jade Sales & Service
5240 Hwy 64
Farmington, NM 87401

Tech: Adrian Velarde
PO #: TBD
Account #: JSS-115

Instrument Identification

Description: Digital Pressure Calibrator
Manufacture: Beta Calibrators
Accuracy: Manufacturer's Specifications

Model: 321
Serial #: 9622076

Certification Information

Reason For Service: Maintenance of Accuracy
Type Of Calibration: Pneumatic Gauge
As Found Condition: Out of Tolerance (RTD)
As Left Condition: In Tolerance (All)
Procedure: Mfr's 100055-3
Technician Remarks: Previous calibration by JM Test on 08/25/2015

Attested By:
Technician: Steve Olsen
Cal Date: 26-Mar-2018
Cal Due: 26-Mar-2019
Temperature: 23 +/- 3.0° C
Relative Humidity: 20% - 60%

This instrument has been calibrated using standards with accuracies traceable to the National Institute of Standards and Technology, derived from natural physical constants, derived from ratio measurements, or compared consensus standards.

MESA MEASUREMENT's calibrations, as applicable, are performed in compliance with the requirements of ANSI/NCSL Z540-1-1994, ISO 10012-1 & ISO/IEC 17025 Quality Standards.

The results contained herein relate only to the item calibrated. Calibration due dates appearing on the Certificate of Calibration and label are determined by the client for administrative purposes and do not imply continued conformance to specification.

Calibration Data

Range :	0 to 800 In.H2O @ 60° Fahrenheit
Stated Accuracy :	+/- 0.025% of Full Scale

Standard :	PM600-G200K
Serial No.:	3231005

Step	Reference's Indicated Value	As Found Calibrator's Reading	As Left Calibrator's Reading	Acceptance Minimum	Limits Maximum
1	0.000	0.00	0.00	-0.05	0.05
2	800.000	800.12	800.12	799.80	800.20
3	720.000	720.13	720.13	719.80	720.20
4	640.000	640.09	640.08	639.80	640.20
5	560.000	560.09	560.08	559.80	560.20
6	480.000	480.06	480.06	479.80	480.20
7	400.000	400.06	400.05	399.80	400.20
8	320.000	320.04	320.03	319.80	320.20
9	240.000	240.02	240.01	239.80	240.20
10	160.000	160.02	160.00	159.80	160.20
11	80.000	80.02	80.00	79.80	80.20
12	0.000	0.04	0.02	-0.05	0.05

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, July 12, 2018 4:58 PM
To: Ryan Merrion (ryan@merrion.bz); Ryan Davis (rdavis@merrion.bz); 'pthompson@merrion.bz'
Cc: Sanchez, Daniel J., EMNRD; Griswold, Jim, EMNRD; Goetze, Phillip, EMNRD; Powell, Brandon, EMNRD; Kuehling, Monica, EMNRD
Subject: UIC Class I (NH) SUNCO Well No. 1 (API# 30-045-28653) Disposal Well (UICI-005) C-103 Form Dated by Operator 6/14/2018 and Approved by OCD with Conditions June 21, 2018

Ladies and Gentlemen:

The New Mexico Oil Conservation Division (OCD) has received and reviewed all requested information associated with the above subject temperature survey run by Blue Jet, Inc. on June 26, 2018.

OCD concurs with Merrion Oil & Gas (Operator) and Blue Jet, Inc.'s Temperature Survey (survey) findings and conclusions, which confirm fluid injection is into the Pt. Lookout Formation. The survey did not detect any anomalous temperature fluxes above the injection zone beyond an established temperature gradient during four temperature survey runs.

OCD hereby directs the Operator to comply with the remainder of the OCD approved C-103 Form with Conditions from June 21, 2018.

Please contact Monica Kuehling (Aztec District Office) to schedule the witnessing of the first and consecutive (contingent of availability) Annulus Pressure Tests (30 min.) under static well conditions. Monica will communicate on the chart recorder (include copy of chart recorder calibration sheet with calibration performed less than 3 months from date of MIT), clock speed (function of chart time), spring (spring weight is a function of test pressure), and chart (4-hr. or less) with chart test information (i.e., test type, date, start pressure, end pressure, and witness signatures).

Upon conclusion of the MIT, and within 5 business days, the original MIT chart shall be sent to Carl Chavez (CarlJ.Chavez@state.nm.us) in Santa Fe with a copy to OCD Aztec in order for OCD Santa Fe to issue the final "pass/fail" (Generally +/-10% Pressure Differential) determination.

OCD thanks everyone involved for their cooperation and professionalism in this matter.

Please contact me if you have questions.

Respectfully,

Mr. Carl J. Chavez, CHMM (#13099)
UIC Program Quality Assurance Officer
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Ryan Merrion <ryan@merrion.bz>
Sent: Tuesday, July 10, 2018 3:42 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: Fwd: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018

Ryan Merrion
Production Engineer

MERRION OIL & GAS

ryan@merrion.bz
(303) 653-2231

---------- Forwarded message ----------
From: **Danny Seip** <dseip@bluejetinc.com>
Date: Tue, Jul 3, 2018 at 12:58 PM
Subject: RE: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018
To: Ryan Merrion <ryan@merrion.bz>, Ryan Davis <rdavis@merrion.bz>, daniel.sanchez@state.nm.us, Jim.Griswold@state.nm.us, Phillip.Goetze@state.nm.us, Jeff Davis <jdaguamoss@hotmail.com>, Philana Thompson <pthompson@merrion.bz>, Shacie Murray <shacie@merrion.bz>, charlie.perrin@state.nm.us
Cc: dseip@bluejetinc.com

Hello All,

06/26/2018,

RU Wireline, Crane and Grease injection system- Tubing: 1500 psig. Casing: 850 psig. RIH will 1-7/16" Digital Temp tool and CCL logging from 700' to T.D. (4509') BASE TEMP LOG. The base log showed a natural gradient from 700' to the packer. Just below the packer a significant decrease in temp through the zone of injection. Temp tool was then placed at 4200' while 100 bbls of fluid was pumped waiting for 1:20 minutes after pumping the 1st down pass (TEMP PASS 1) was logged, 4200-4509' recording lower temperatures from 4200- 4509 approximately 29 degrees. After a down time of 30 minutes the 2nd down pass (TEMP PASS 2) was recorded from 4200-4509, at 4200 the temperature had increased about 4 degrees from pass 1 at 4270' the temperatures of both pass we the same temperature indicating fluid entry into the zone of interest due to the slow recovery of temperature over time. we then logged from 4509' to 65' confirming after a time of 2-1/2 hrs the all temperature's above the Pt. Lookout had return to natural gradient.

With all of this information at hand it definitely confirms fluid injection into the Pt. Lookout formation.

Thank you,

Danny L. Seip

President / CEO

Blue Jet, Inc.

700 East Murray Dr.

Farmington, New Mexico, 87401

Cell: 505-320-0172

Off: 505-325-5584

Email: dseip@bluejetinc.com

From: Ryan Merrion [mailto:ryan@merrion.bz]
Sent: Tuesday, July 03, 2018 12:08 PM
To: Danny Seip
Subject: Fwd: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018

Danny,

As per the NMOCD's request, can you please provide your observations and conclusions for the Sunco 1 temperature survey.

Thanks,

Ryan Merrion

Production Engineer



ryan@merrion.bz

(303) 653-2231

---------- Forwarded message ----------
From: **Chavez, Carl J, EMNRD** <CarlJ.Chavez@state.nm.us>
Date: Tue, Jul 3, 2018 at 11:58 AM
Subject: RE: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018
To: Ryan Merrion <ryan@merrion.bz>
Cc: Ryan Davis <rdavis@merrion.bz>, "Sanchez, Daniel J., EMNRD" <daniel.sanchez@state.nm.us>, "Griswold, Jim, EMNRD" <Jim.Griswold@state.nm.us>, "Goetze, Phillip, EMNRD" <Phillip.Goetze@state.nm.us>, Jeff Davis <jdaguamoss@hotmail.com>, Philana Thompson <pthompson@merrion.bz>, Shacie Murray <shacie@merrion.bz>, "Perrin, Charlie, EMNRD" <charlie.perrin@state.nm.us>

Ryan, et al.:

The New Mexico Oil Conservation Division UIC Director Daniel Sanchez is requiring a third-party review of the temperature log with observations with conclusions by Blue Jet™.

Please submit at your earliest convenience.

Thank you for your cooperation in this matter.

Mr. Carl J. Chavez, CHMM (#13099)

New Mexico Oil Conservation Division

Energy Minerals and Natural Resources Department

1220 South St Francis Drive

Santa Fe, New Mexico 87505

Ph. (505) 476-3490

E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Ryan Merrion <ryan@merrion.bz>
Sent: Tuesday, July 3, 2018 11:45 AM

To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Ryan Davis <rdavis@merrion.bz>; Sanchez, Daniel J., EMNRD <daniel.sanchez@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jeff Davis <jdaguamoss@hotmail.com>; Philana Thompson <pthompson@merrion.bz>; Shacie Murray <shacie@merrion.bz>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>
Subject: Re: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018

Please see the attached logs which show the temperature survey above 700'.

Thanks,

Ryan Merrion

Production Engineer

MERRION OIL & GAS

ryan@merrion.bz

(303) 653-2231

On Wed, Jun 27, 2018 at 4:01 PM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:

> Ryan:
>
> The New Mexico Oil Conservation Division is in receipt of the survey results and will respond soon.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)

UIC Program Quality Assurance Officer

New Mexico Oil Conservation Division

Energy Minerals and Natural Resources Department

1220 South St Francis Drive

Santa Fe, New Mexico 87505

Ph. (505) 476-3490

E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Ryan Merrion <ryan@merrion.bz>
Sent: Wednesday, June 27, 2018 2:36 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Ryan Davis <rdavis@merrion.bz>; Sanchez, Daniel J., EMNRD <daniel.sanchez@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jeff Davis <jdaguamoss@hotmail.com>; Philana Thompson <pthompson@merrion.bz>; Shacie Murray <shacie@merrion.bz>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>
Subject: Re: Agua Moss Sunco Well Mtg.(UICI-5) C-103 Form Dated by Operator 6/14/2018

Carl, et al,

Philana is out of the office today, but I wanted to get the temperature survey results to you. Please see the report below:

06/22/2018

Tubing: 0 psig. Casing: 825 psig. Rig up Tefteller slickline. RIH with a spear and equalized tubing plug. Tubing pressure increased to 1475 psig. RIH with an overshot and retrieved tubing plug at 4,460'. Shut in tubing and rigged down Tefteller.

06/26/2018

Tubing: 1500 psig. Casing: 850 psig. RU BlueJet Inc wireline. RIH with base temperature log and surveyed from 700' KB to 4506' KB. Pulled logging tools up to 3,989' KB. Injected 100 bbls of water down tubing at 75 bbl/hr. Please see the following table:

Tubing (psig)	Casing (psig)	Time
1700	850	9:04 AM
1800	775	9:15 AM
1825	500	9:30 AM
1900	420	10:00 AM
1920	410	10:25 AM

Temperature at the tool depth decreased from 128 deg F to 86 deg F during injection. After injecting fluid, two log runs were made from 4200'KB to 4506'KB. The timeframe for these log intervals was 30 minutes and 1:20 minutes after injecting fluid. The final temperature survey was completed coming out of hole. Tubing was shut in and wireline rigged down. Final casing pressure was 800 psig.

Log Interpretation:

The baseline temperature survey (TEMP) shows a normal temperature gradient from surface down to the packer. Below the packer, temperature significantly decreases around the interval of injection. TEMP Pass #2 and #3 were ran 30 minutes and 1:20 minutes after injecting 100 bbls of fluid. Both temperature curves converge and maintain temperature at the perforation interval 4,350'-4,460'. Thermal warming effects take place above the injection interval as time progresses. No major anomalies off temperature gradient were noticed above the packer. From these temperature survey results, Agua Moss believes injection is still maintained within the Pt. Lookout formation. Please see attached.

Please let me know if you have any questions.

Thanks,

Ryan Merrion

Production Engineer

ryan@merrion.bz

(303) 653-2231


Virus-free. www.avg.com

BLUEJET INC. PERFORATING LOGGING

TEMPERATURE SURVEY
1 7/16" DIGITAL TEMP TOOL
FINAL PRINT

Company AGUA MOSS, LLC
Well SUNCO DISPOSAL NO. 1
Field FLORA VISTA MESAVERDE
County SAN JUAN State N.M.

Location: API # : NA
1595 FNL & 1005 FWL
SEC 2 TWP 29N RGE 12W

Other Services

Elevation	
K.B.	5874
D.F.	5873
G.L.	5859

Permanent Datum	G.L.	Elevation	5859
Log Measured From	KB		
Drilling Measured From	KB		

Date	6/26/2018
Run Number	1
Depth Driller	4711
Depth Logger	4506
Bottom Logged Interval	4506
Top Log Interval	3990
Open Hole Size	
Type Fluid	H20
Density / Viscosity	NA
Max. Recorded Temp.	
Estimated Cement Top	
Time Well Ready	7:45 AM
Time Logger on Bottom	9:00 AM
Equipment Number	D6 TEMP 005
Location	FRM
Recorded By	ETHAN RISLEY
Witnessed By	RYAN MERRION

Borehole Record

Run Number	Bit	From	To
ONE	12.25	0	235
	7.875	235	4760

Tubing Record

Size	Wgt/Ft	Top	Bottom

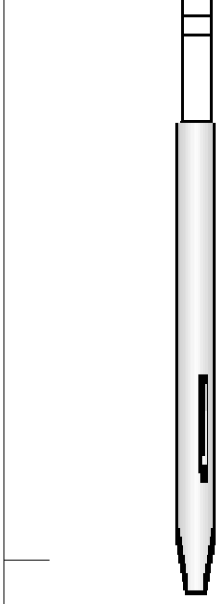
Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.625	24#	0	235
Prot. String	5.5	15.5#	235	4760
Production String				
Liner				

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
CCL	3.00		CCL-SPCL (SPCL1)	1.35	1.69	10.00



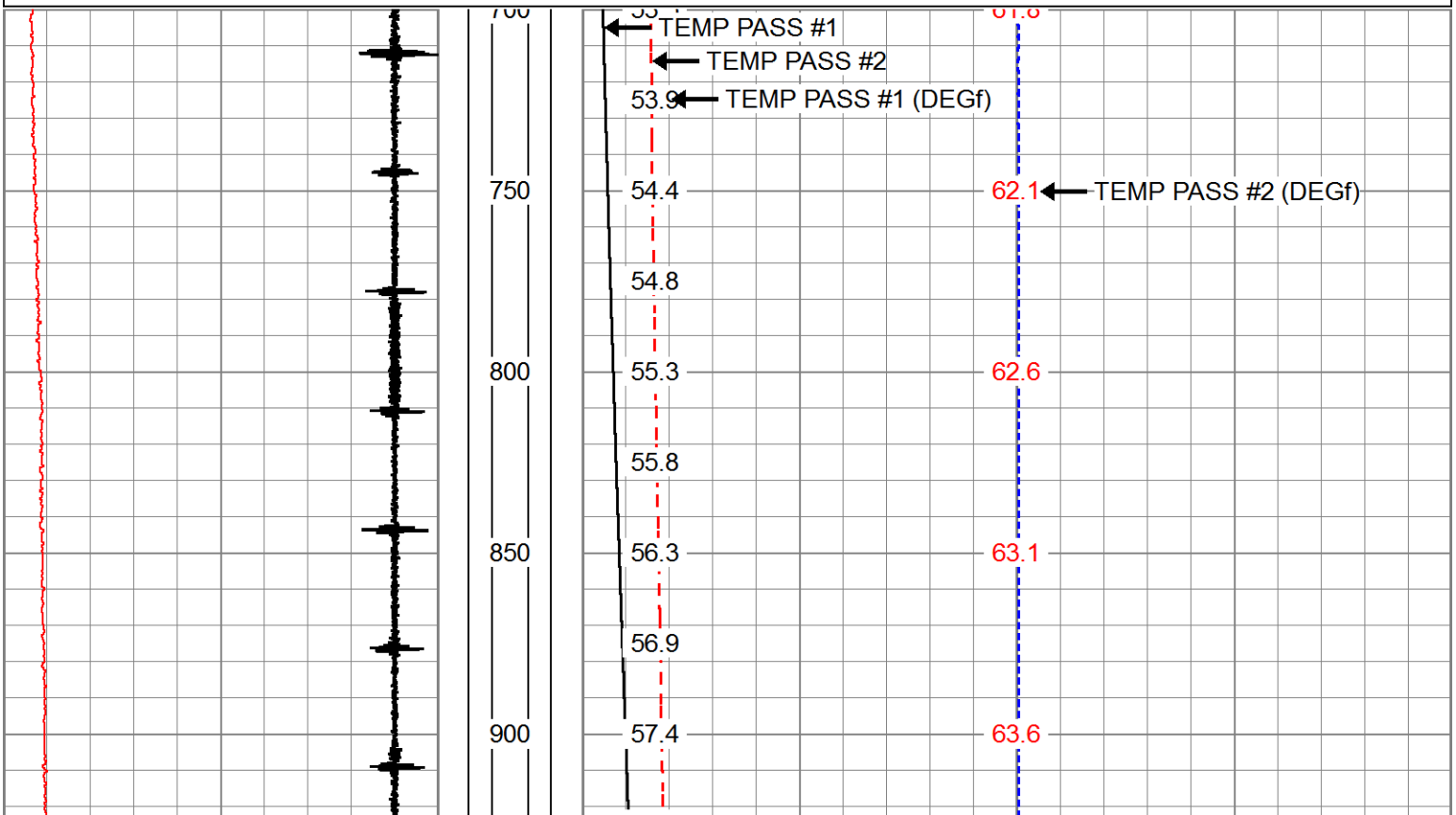
			1 11/16" Logging CCL			
			TEMP-Comprobe (FW1302-005) Comprobe Temperature Tool	2.30	1.44	4.00
TEMP	0.17					

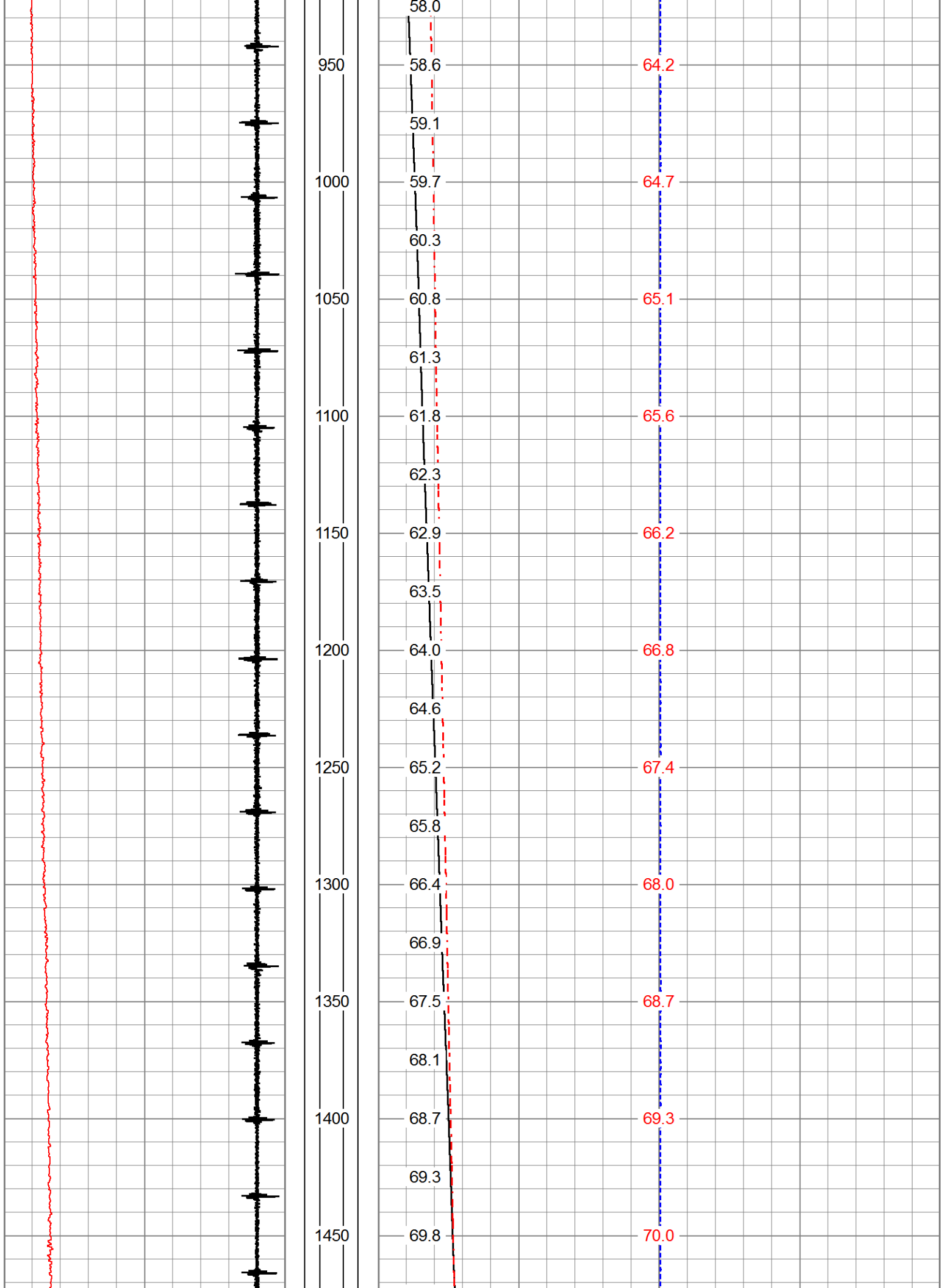
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Total length:	3.65 ft
Total weight:	14.00 lb
O.D.:	1.69 in

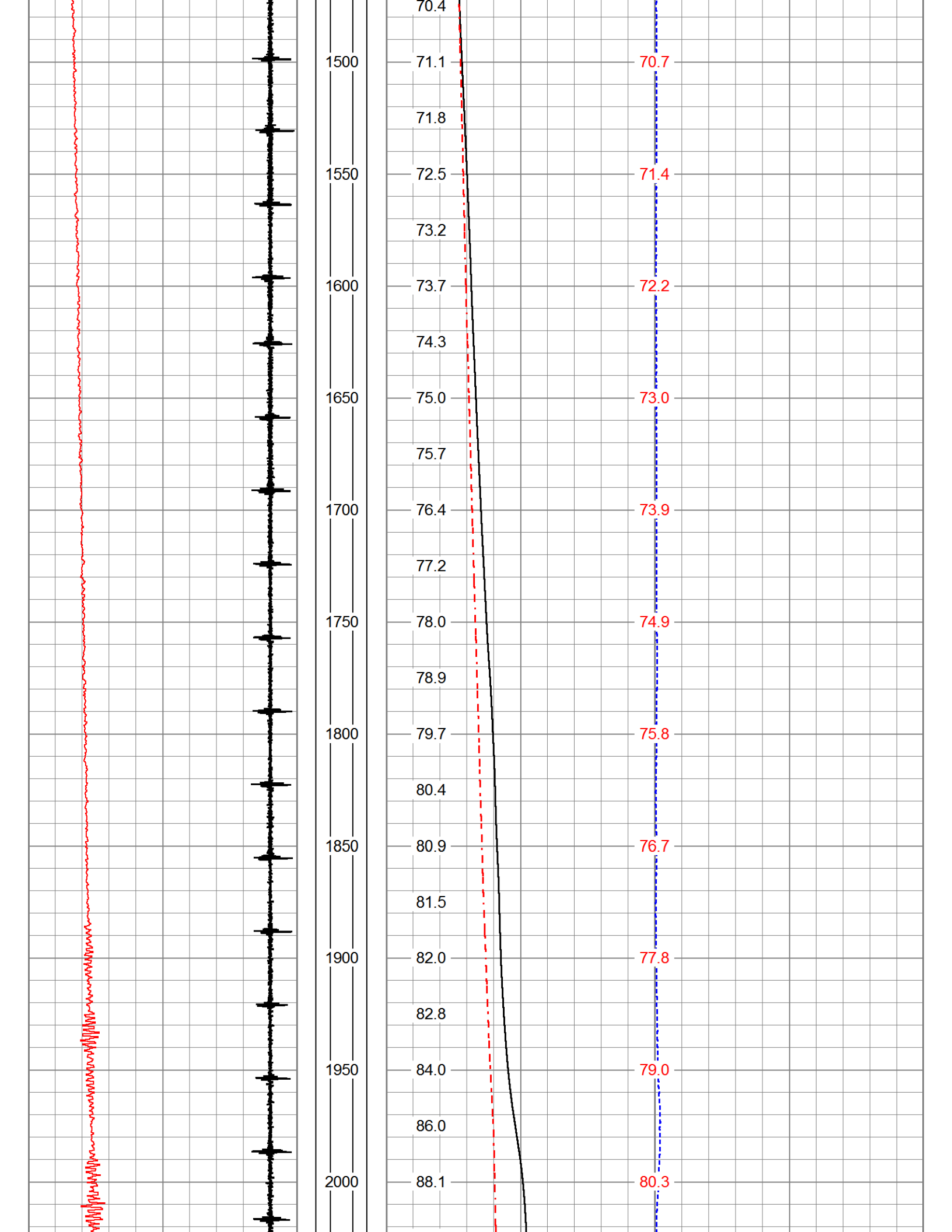
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Dataset Creation	Tue Jun 26 13:38:22 2018
Charted by	Depth in Feet scaled 1:600

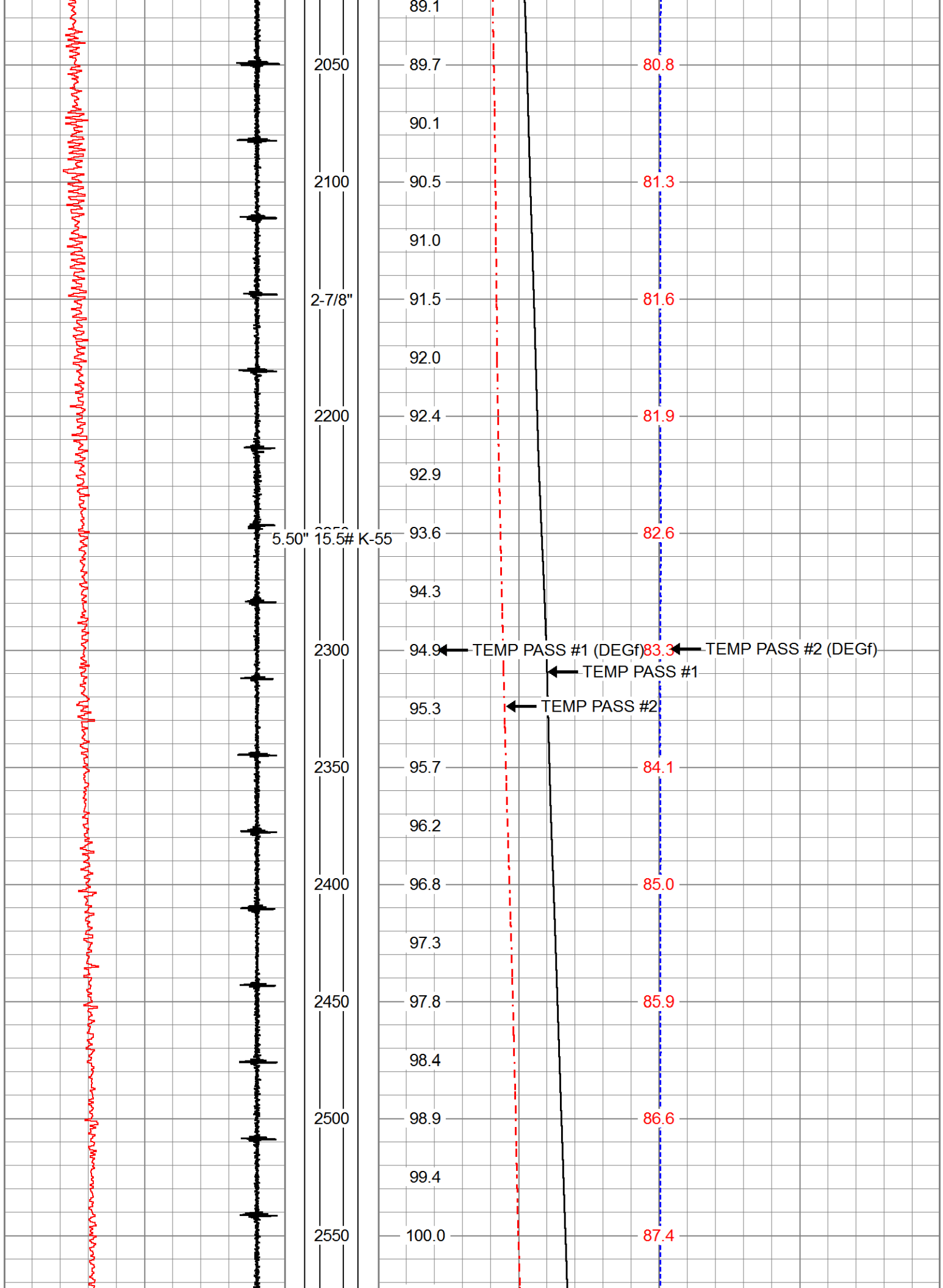
9	CCL	-1
0	LTEN (lb)	1700

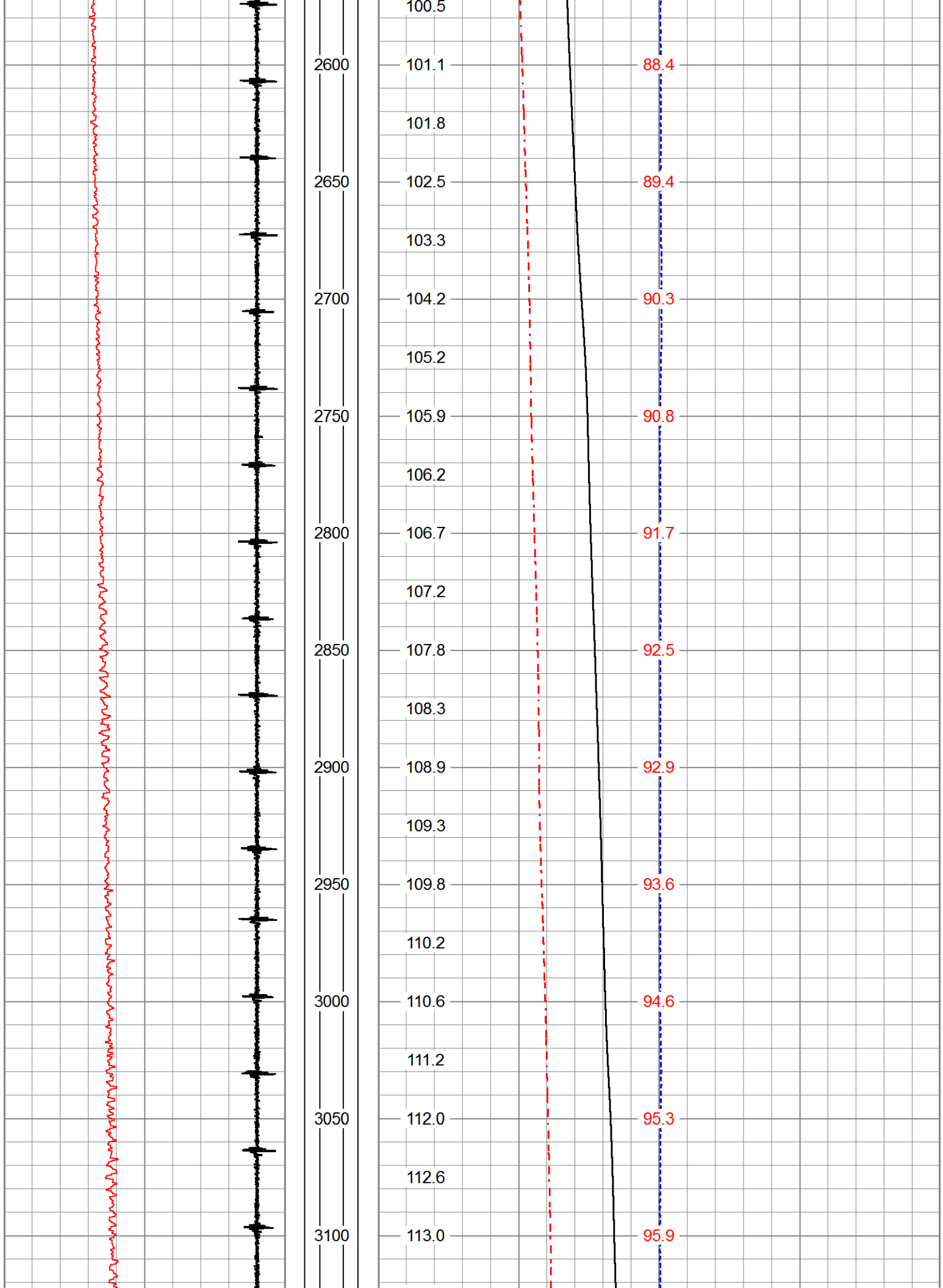
50	TEMP (degF)	200
-5	DTMP (degF)	5
50	TEM2 (degF)	200

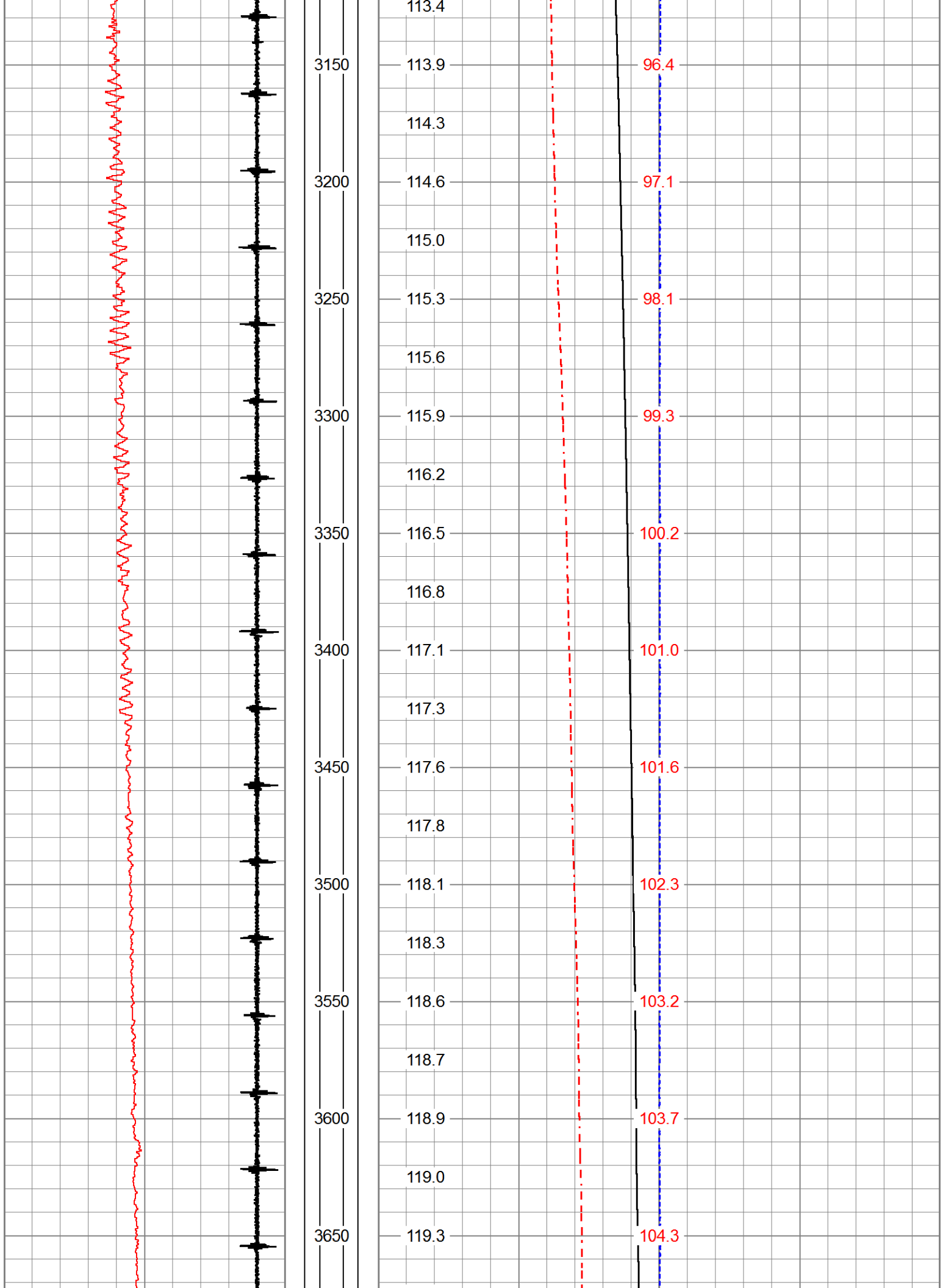


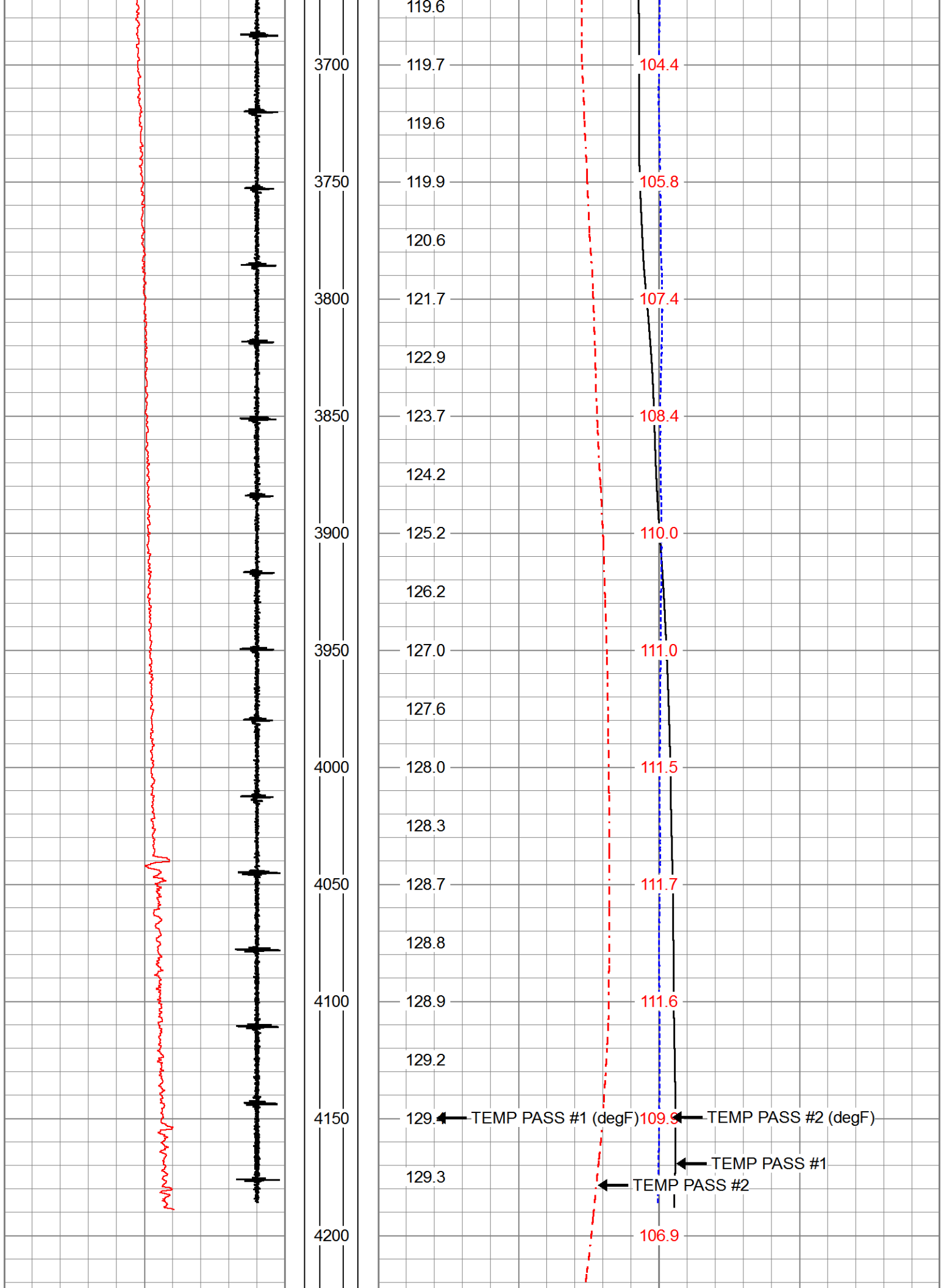

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1050
1100
1150
1200
1250
1300
1350
1400
1450
58.0
58.6
59.1
59.7
60.3
60.8
61.3
61.8
62.3
62.9
63.5
64.0
64.6
65.2
65.8
66.4
66.9
67.5
68.1
68.7
69.3
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69.3
70.0

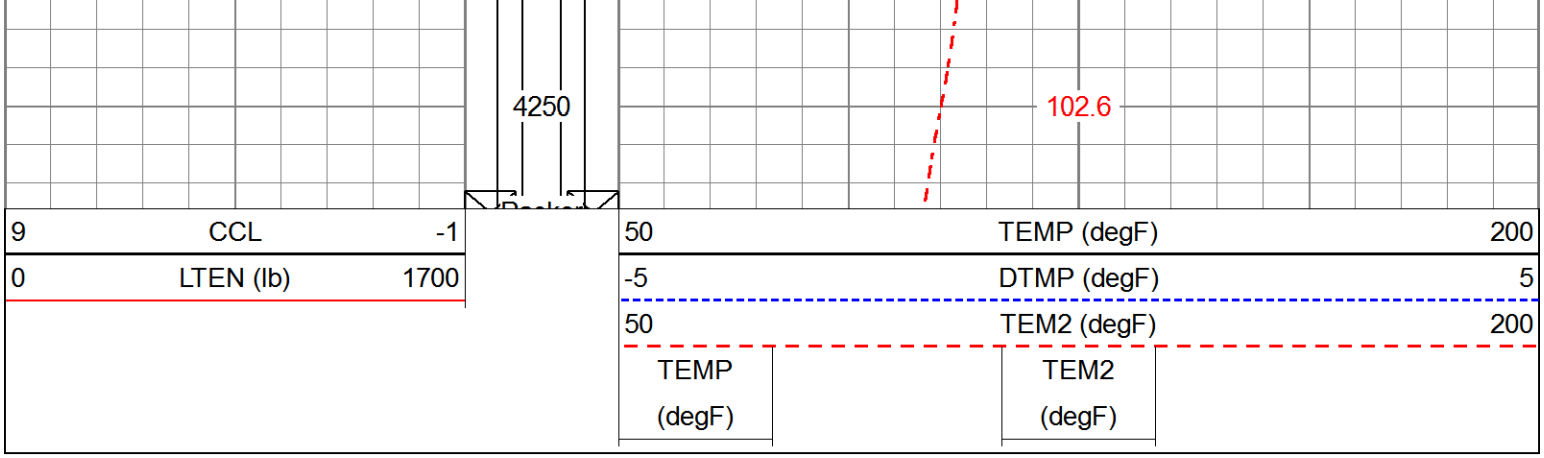

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1650
1700
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1800
1850
1900
1950
2000
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71.8
72.5
73.2
73.7
74.3
75.0
75.7
76.4
77.2
78.0
78.9
79.7
80.4
80.9
81.5
82.0
82.8
84.0
86.0
88.1
70.7
71.4
72.2
73.0
73.9
74.9
75.8
76.7
77.8
79.0
80.3


89.1
2050
89.7
80.8
90.1
2100
90.5
81.3
91.0
2-7/8"
91.5
81.6
92.0
2200
92.4
81.9
92.9
5.50" 15.5# K-55
93.6
82.6
94.3
2300
94.9
TEMP PASS #1 (DEGf)
83.3
TEMP PASS #2 (DEGf)
TEMP PASS #1
95.3
TEMP PASS #2
2350
95.7
84.1
96.2
2400
96.8
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2450
97.8
85.9
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2500
98.9
86.6
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2550
100.0
87.4

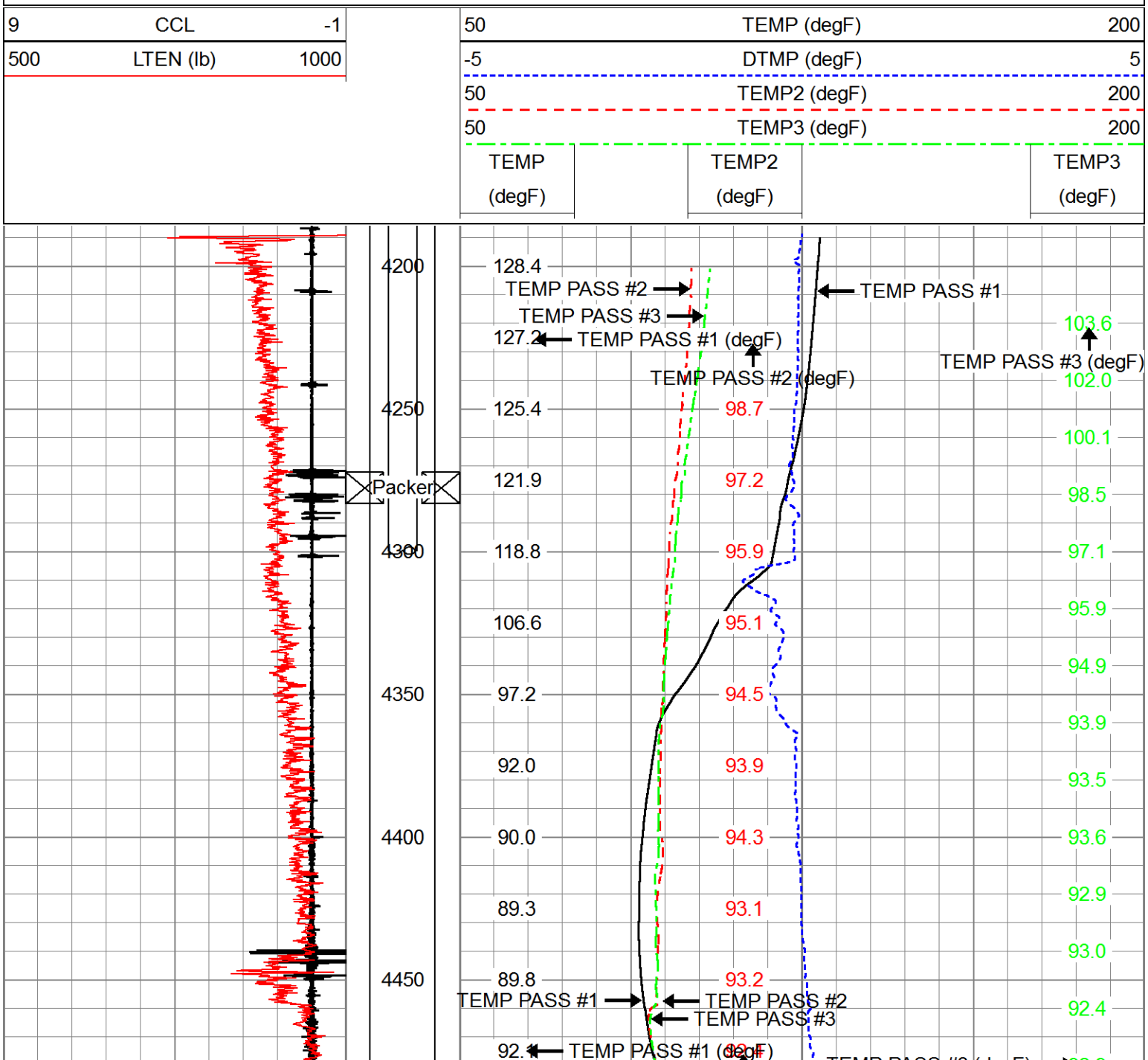

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88.4
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2750
105.9
90.8
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2800
106.7
91.7
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2950
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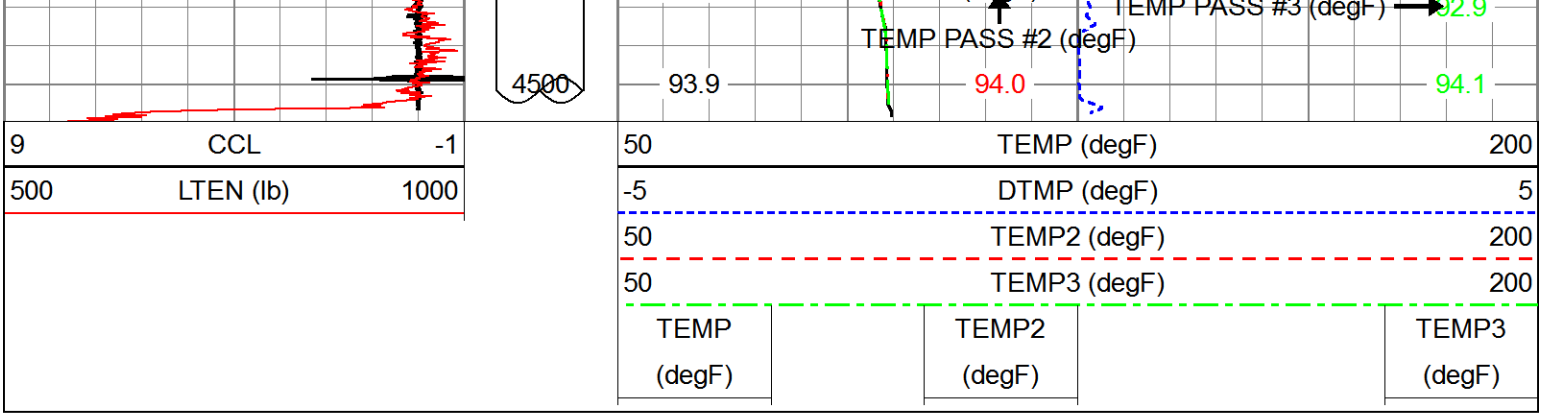

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3250
3300
3350
3400
3450
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3550
3600
3650
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115.3
115.6
115.9
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116.5
116.8
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118.3
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119.0
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99.3
100.2
101.0
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102.3
103.2
103.7
104.3


3700
3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
119.6
119.7
104.4
119.6
119.9
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120.6
121.7
107.4
122.9
123.7
108.4
124.2
125.2
110.0
126.2
127.0
111.0
127.6
128.0
111.5
128.3
128.7
111.7
128.8
128.9
111.6
129.2
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TEMP PASS #1 (degF)
109.9
TEMP PASS #2 (degF)
TEMP PASS #1
129.3
TEMP PASS #2
106.9

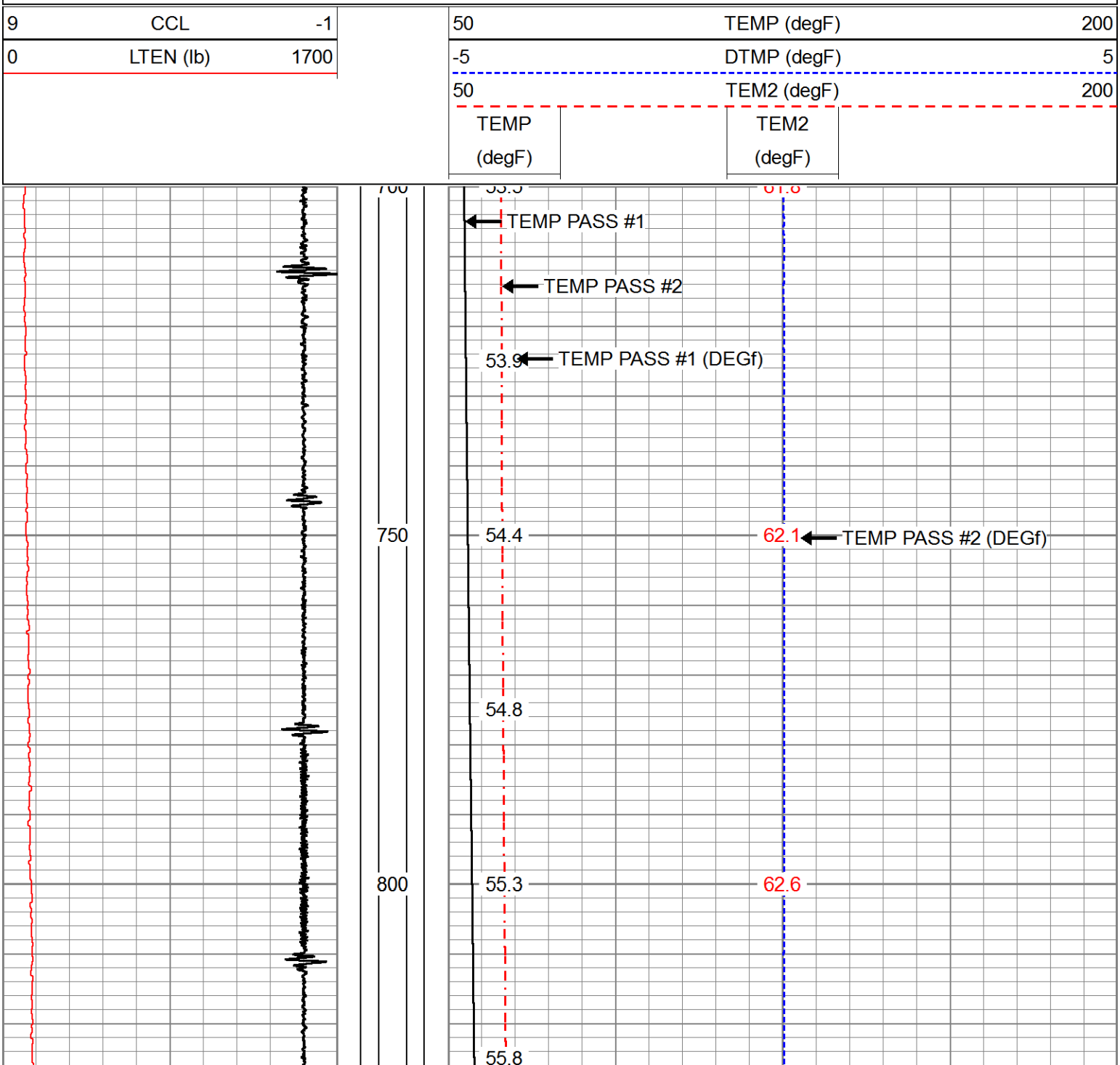


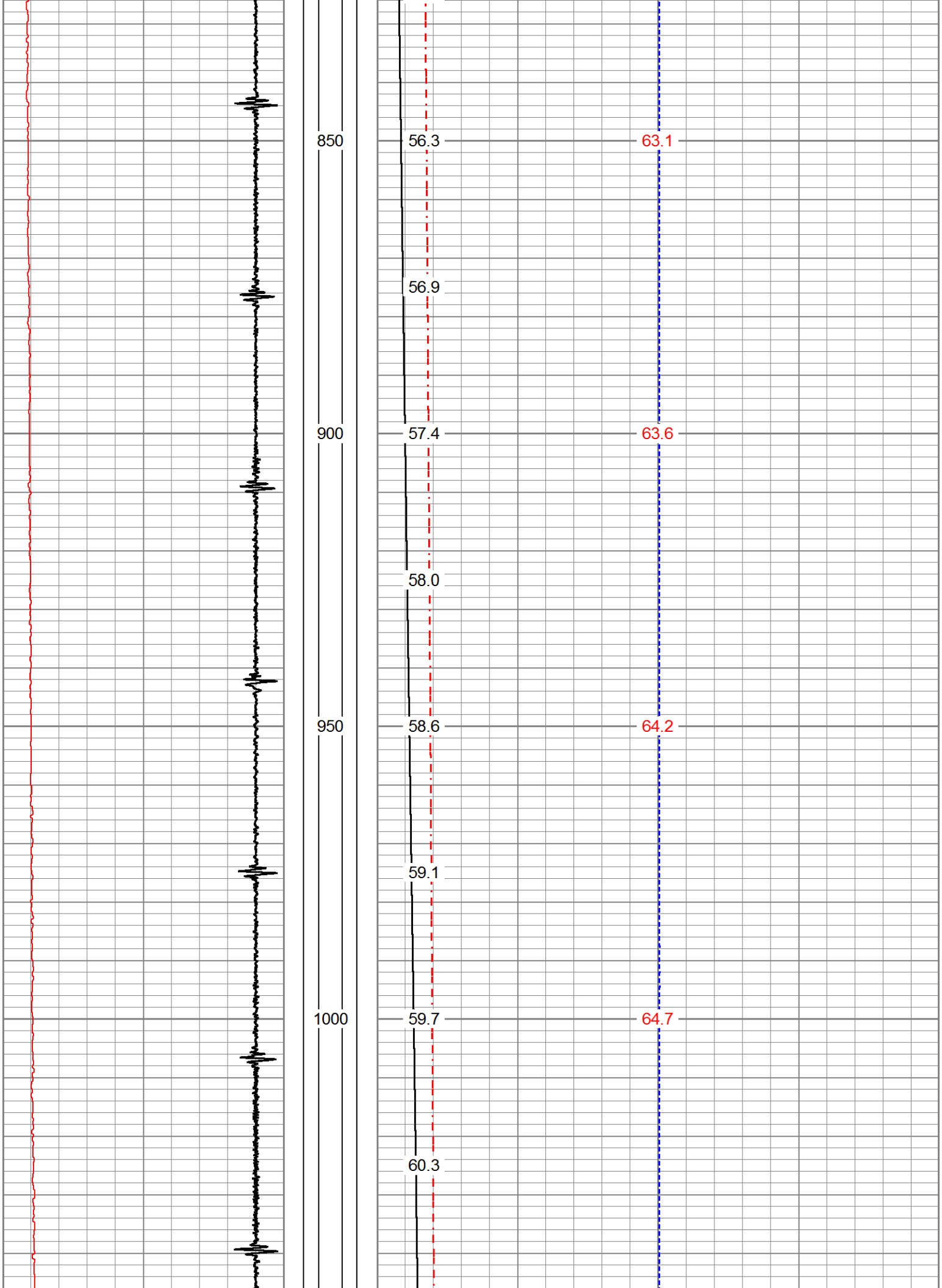
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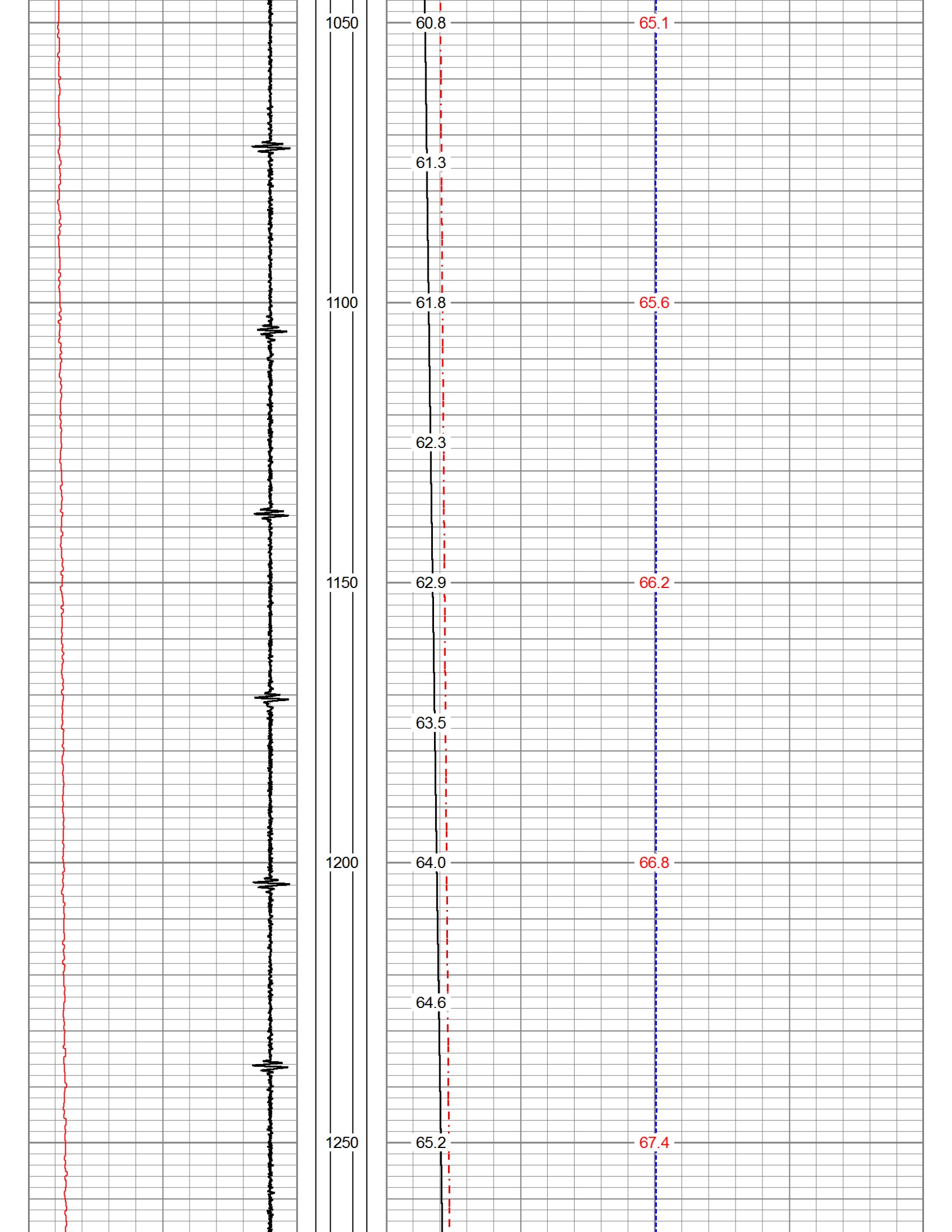


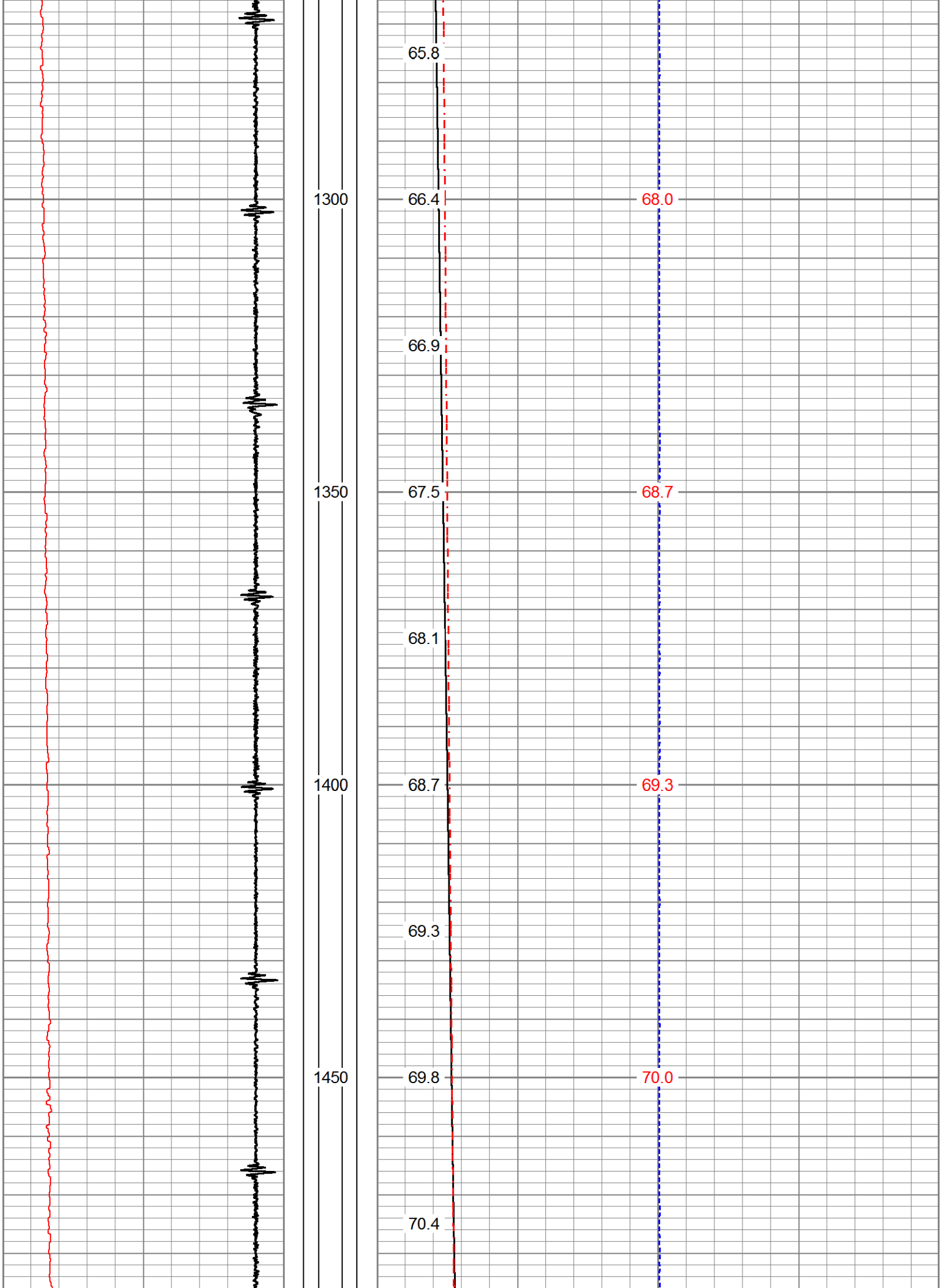


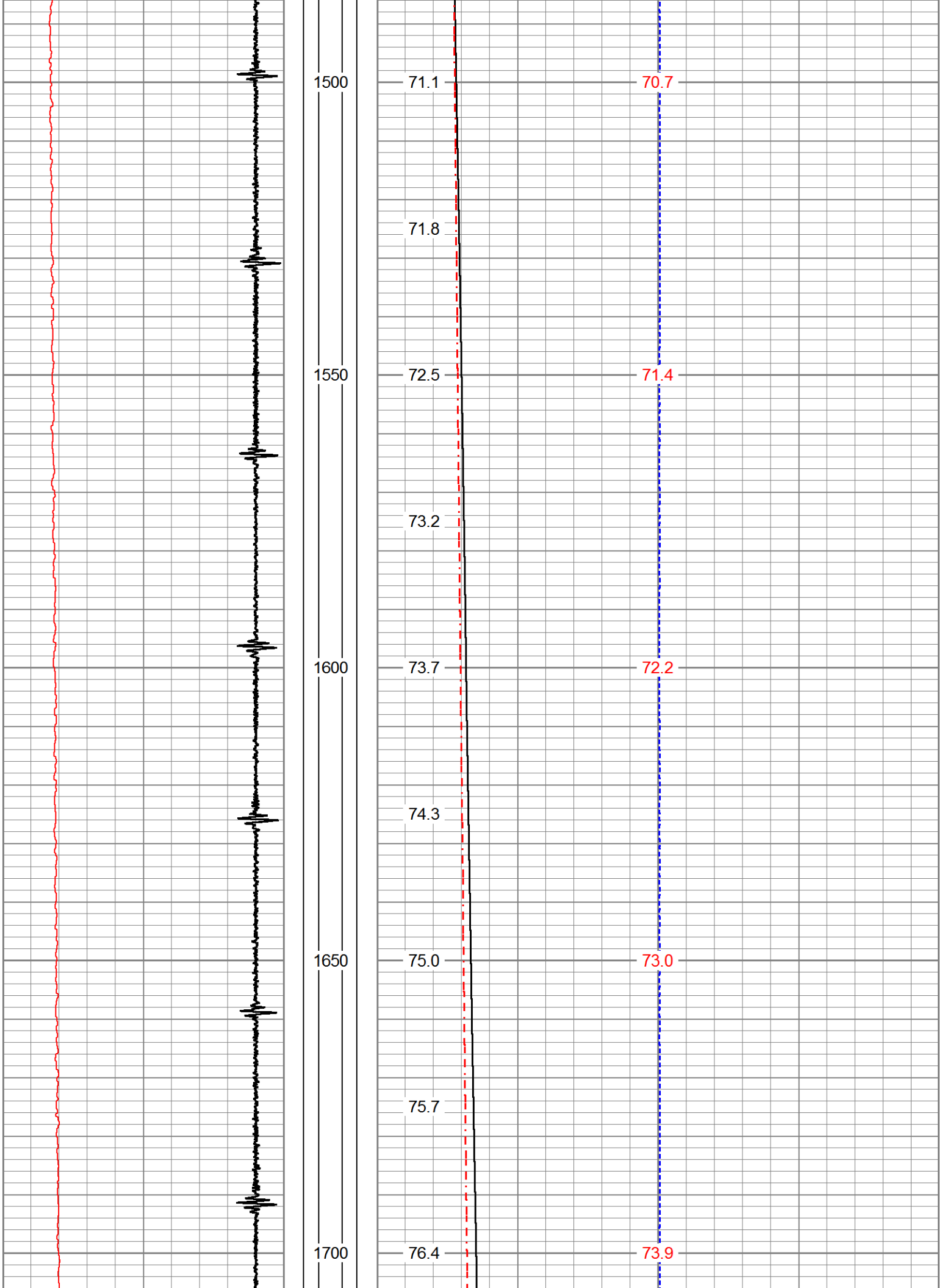
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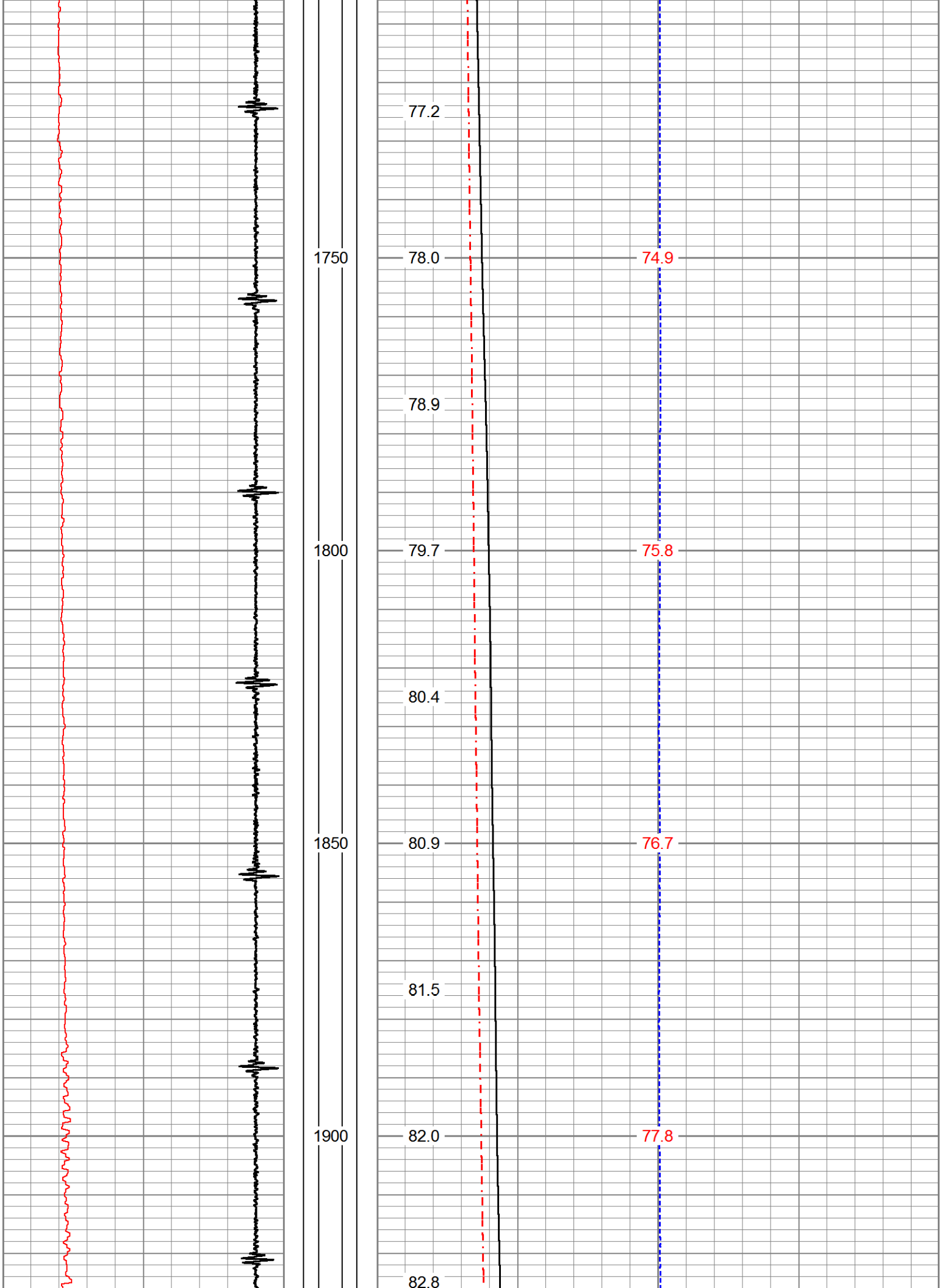


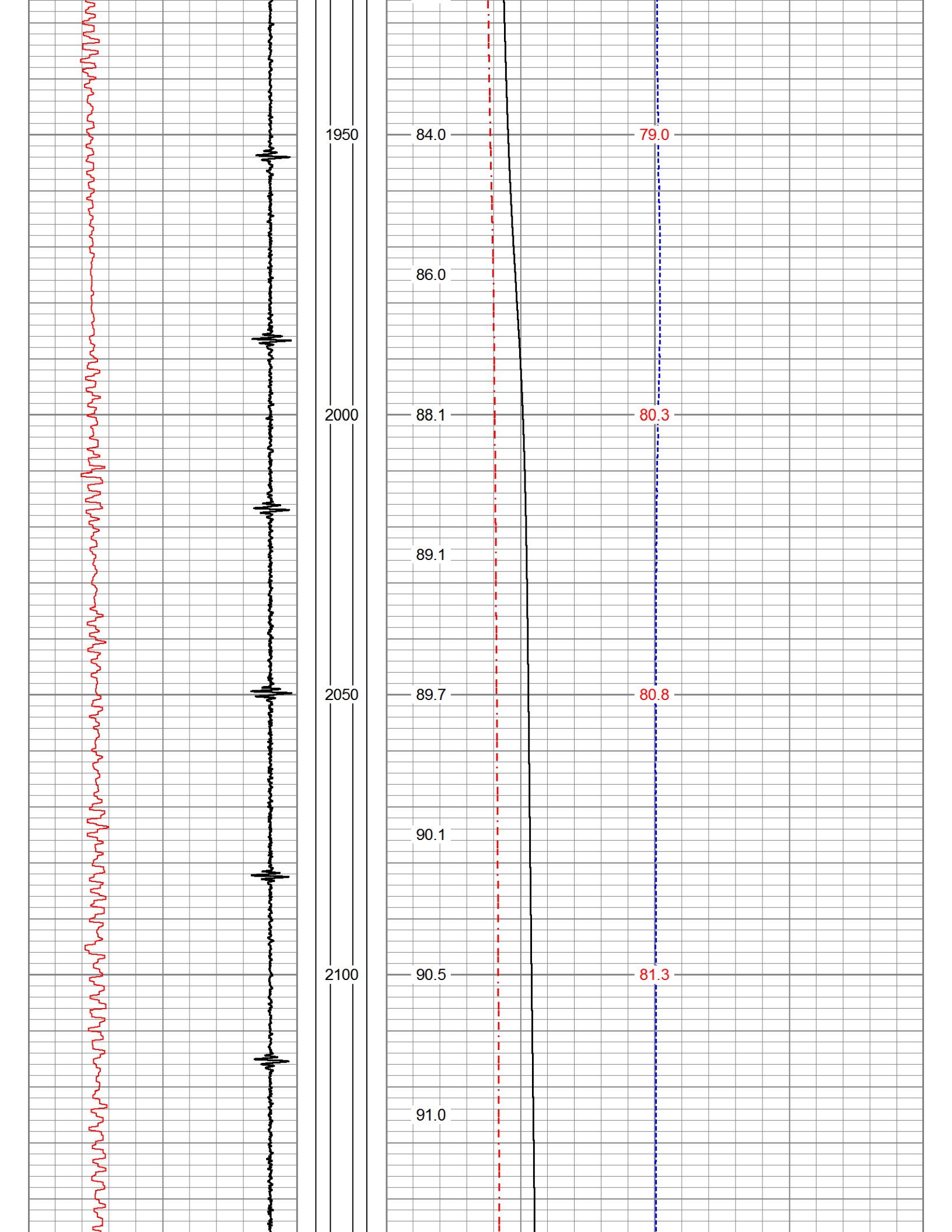

850
56.3
63.1
56.9
900
57.4
63.6
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950
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64.2
59.1
1000
59.7
64.7
60.3

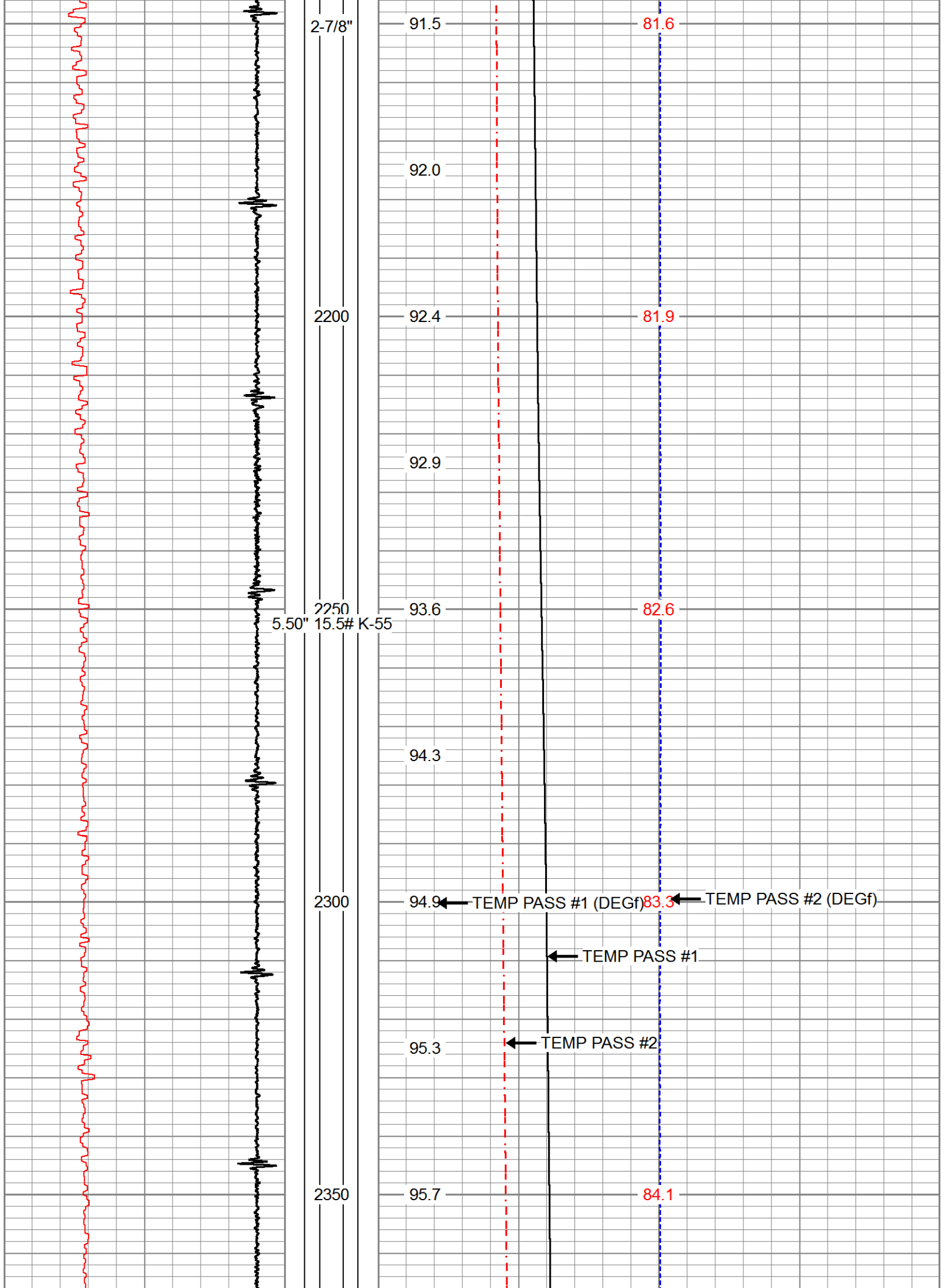

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60.8
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61.3
1100
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67.4

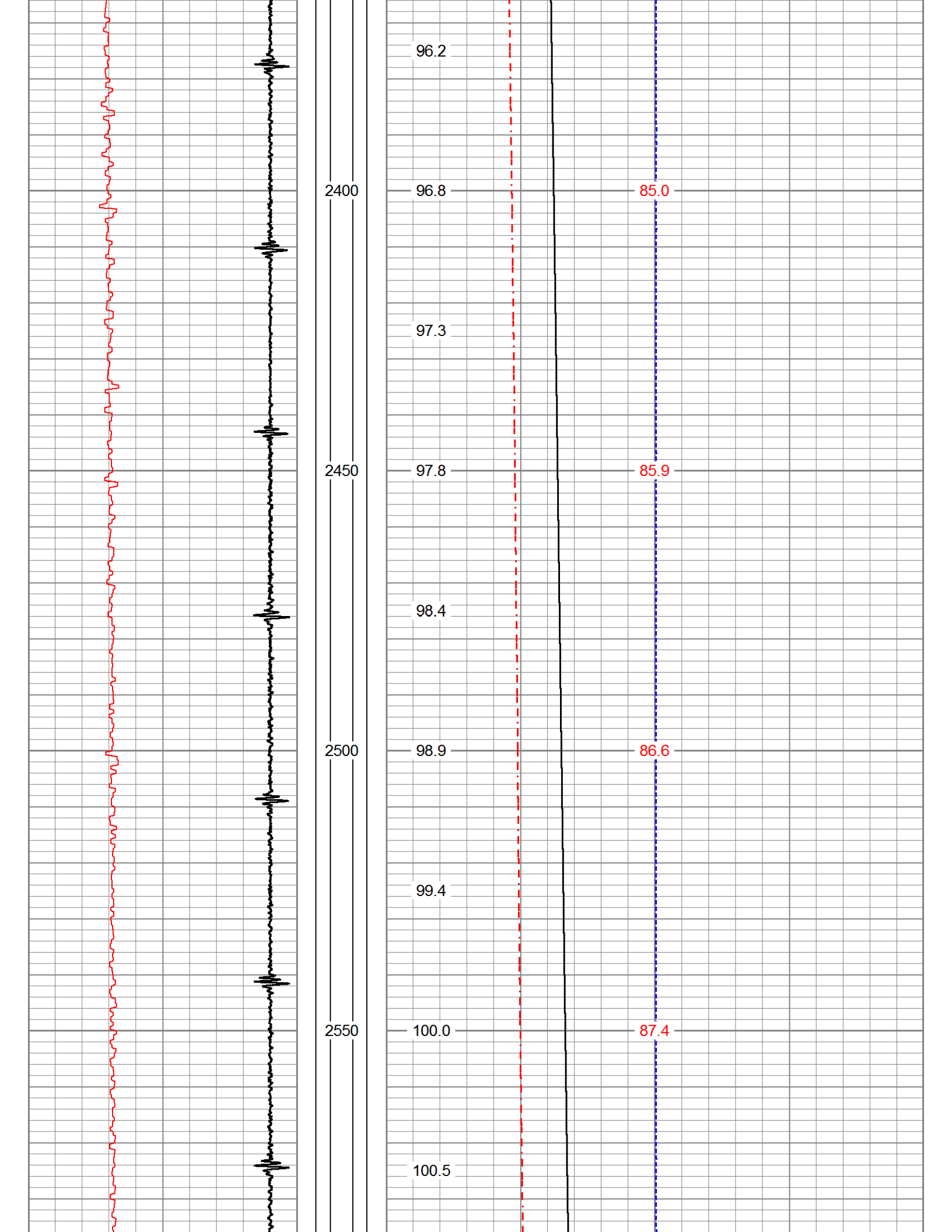

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70.4

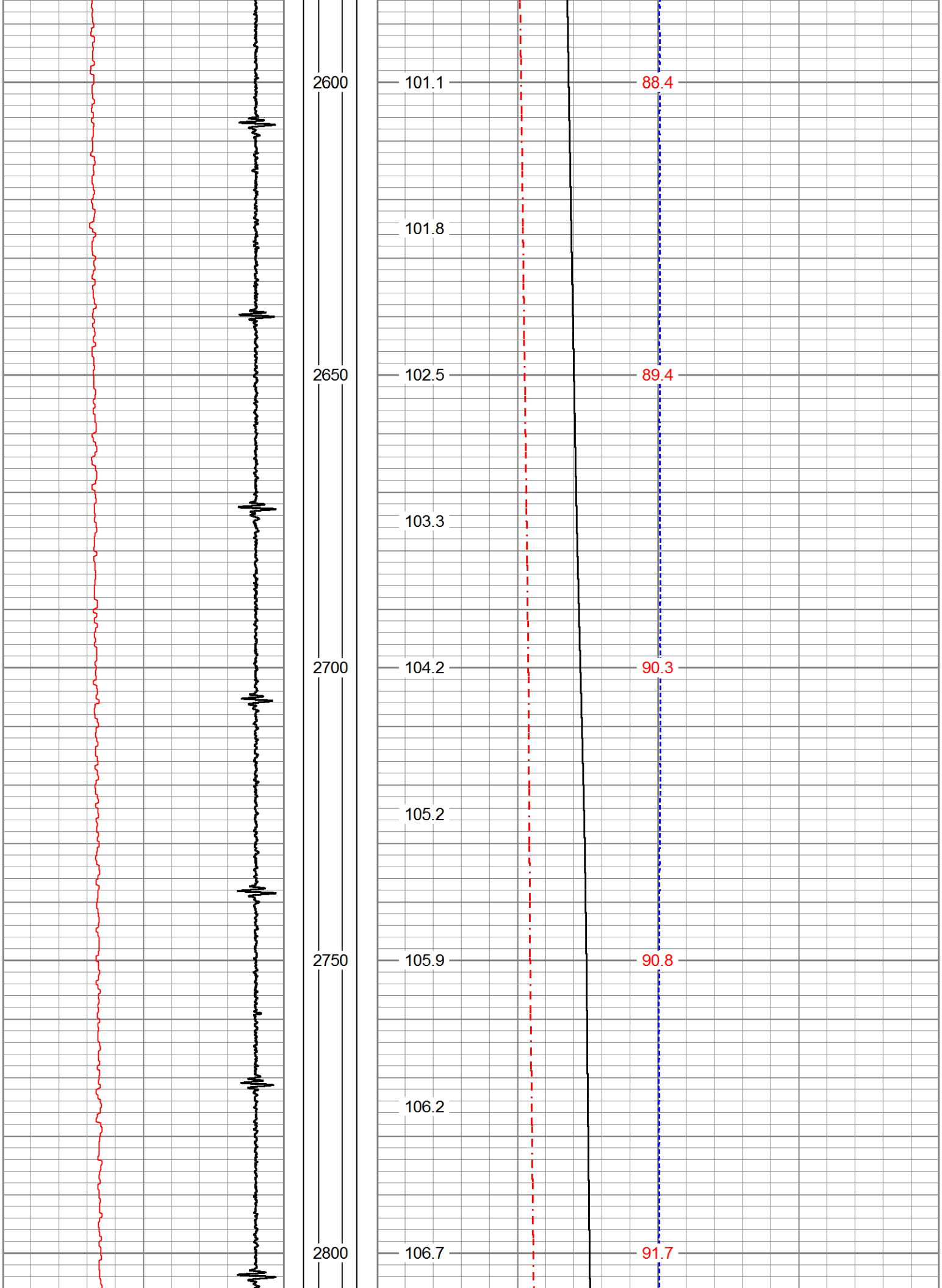

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71.8
1550
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73.9

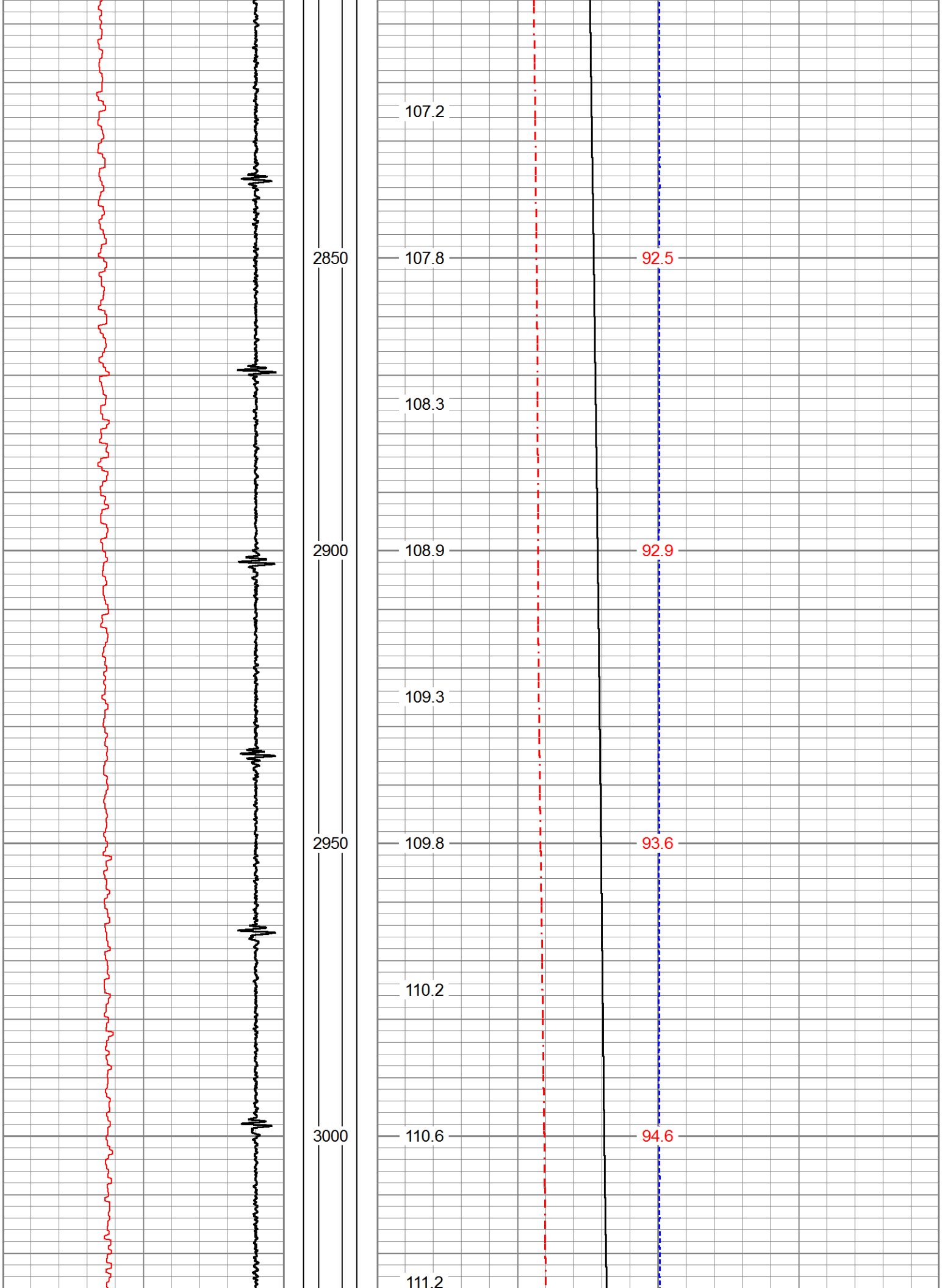

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82.8

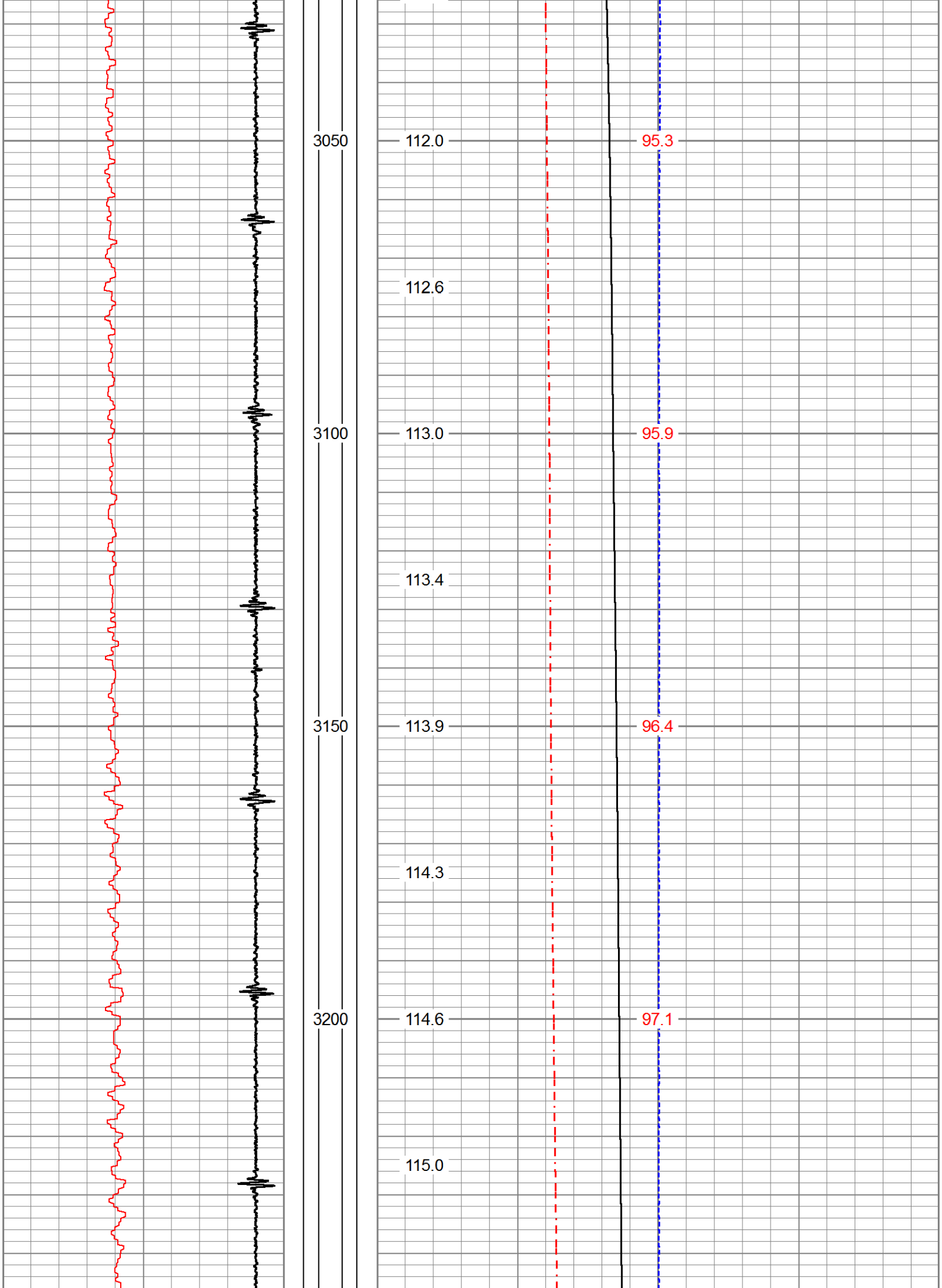

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89.7
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90.1
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91.0

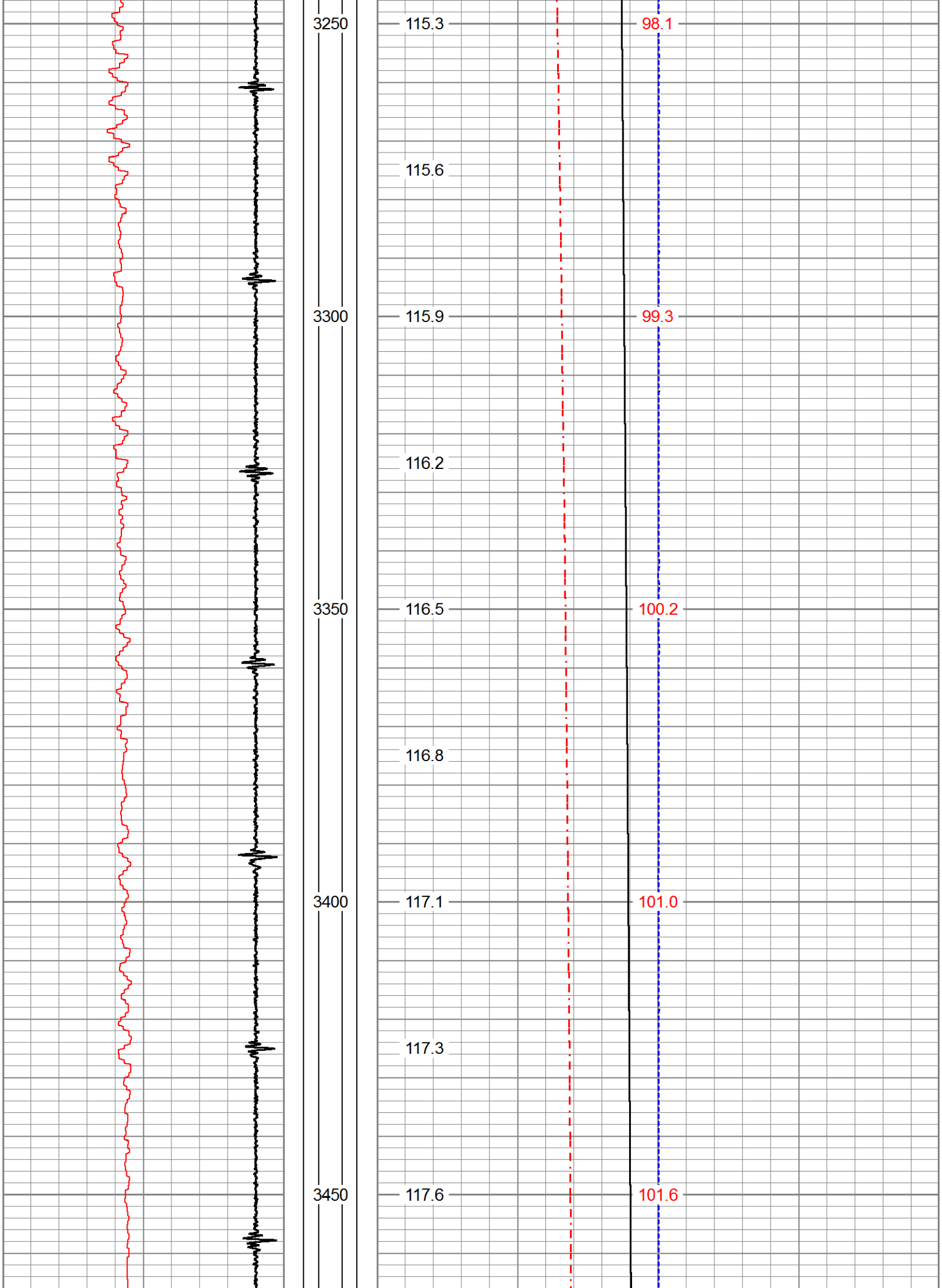

2-7/8"
91.5
81.6
92.0
2200
92.4
81.9
92.9
2250
93.6
82.6
5.50" 15.5# K-55
94.3
2300
94.9
TEMP PASS #1 (DEGf)
83.3
TEMP PASS #2 (DEGf)
TEMP PASS #1
95.3
TEMP PASS #2
2350
95.7
84.1

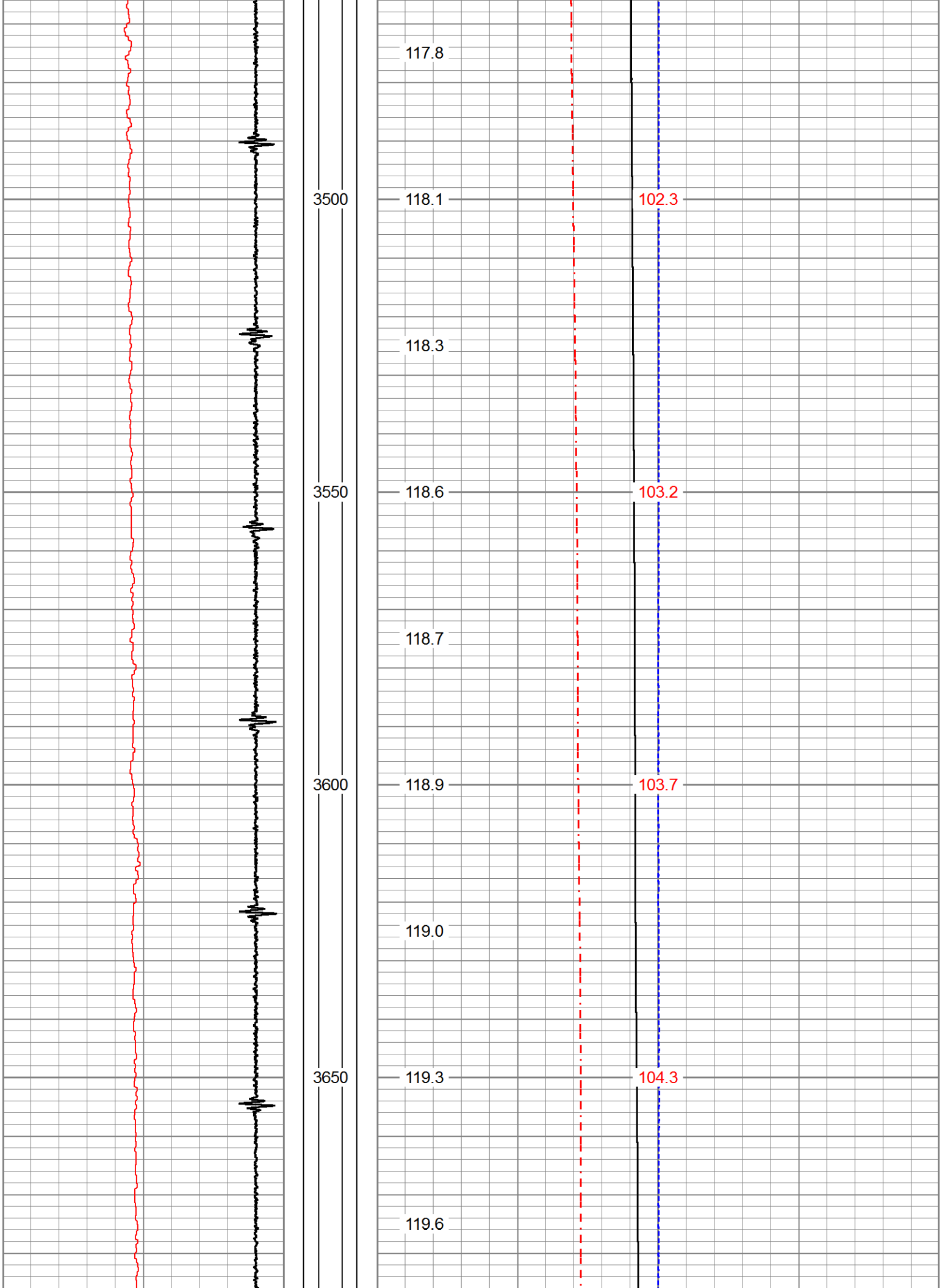

96.2
2400
96.8
85.0
97.3
2450
97.8
85.9
98.4
2500
98.9
86.6
99.4
2550
100.0
87.4
100.5

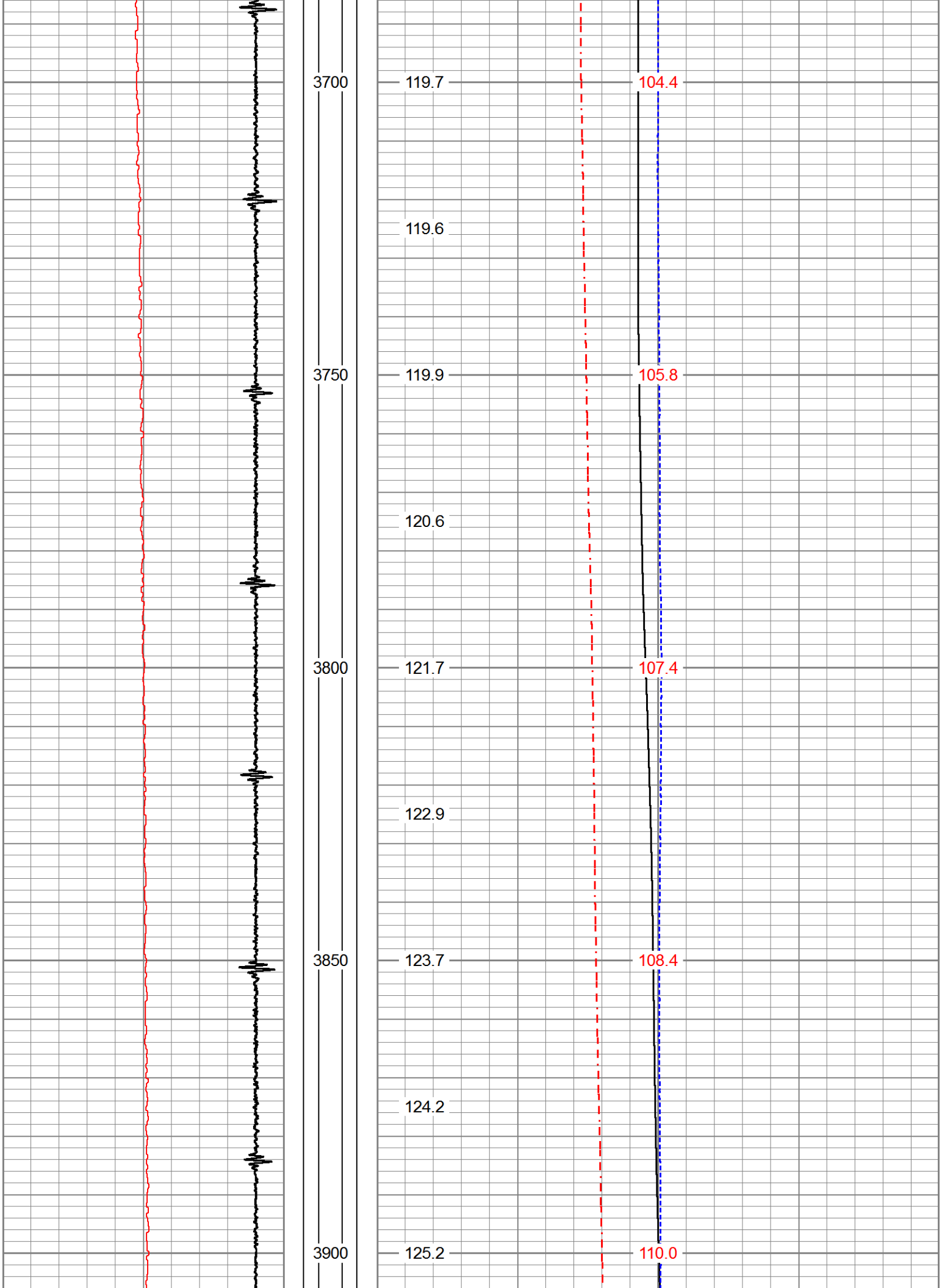

2600
101.1
88.4
101.8
2650
102.5
89.4
103.3
2700
104.2
90.3
105.2
2750
105.9
90.8
106.2
2800
106.7
91.7

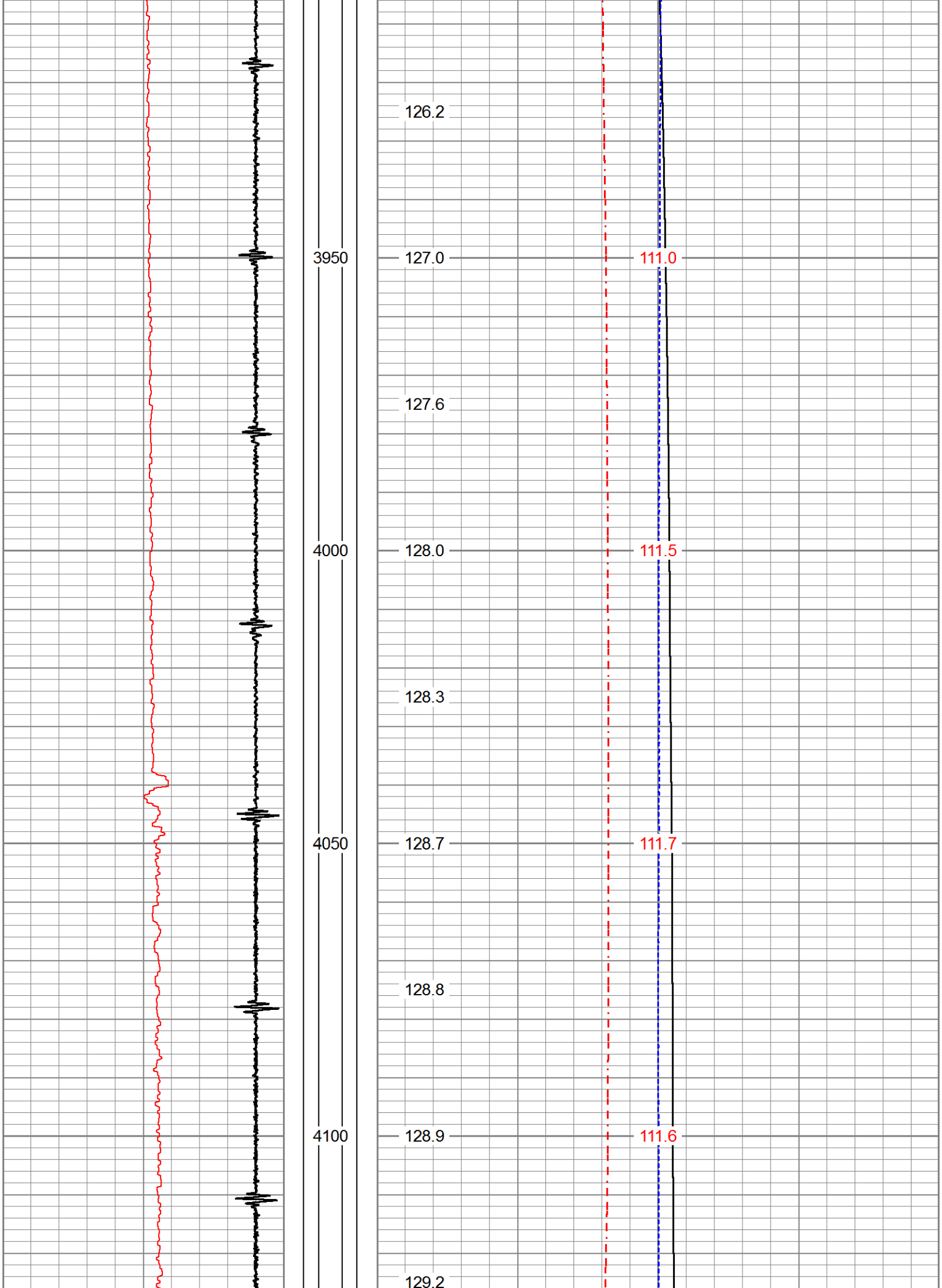

107.2
2850
107.8
92.5
108.3
2900
108.9
92.9
109.3
2950
109.8
93.6
110.2
3000
110.6
94.6
111.2

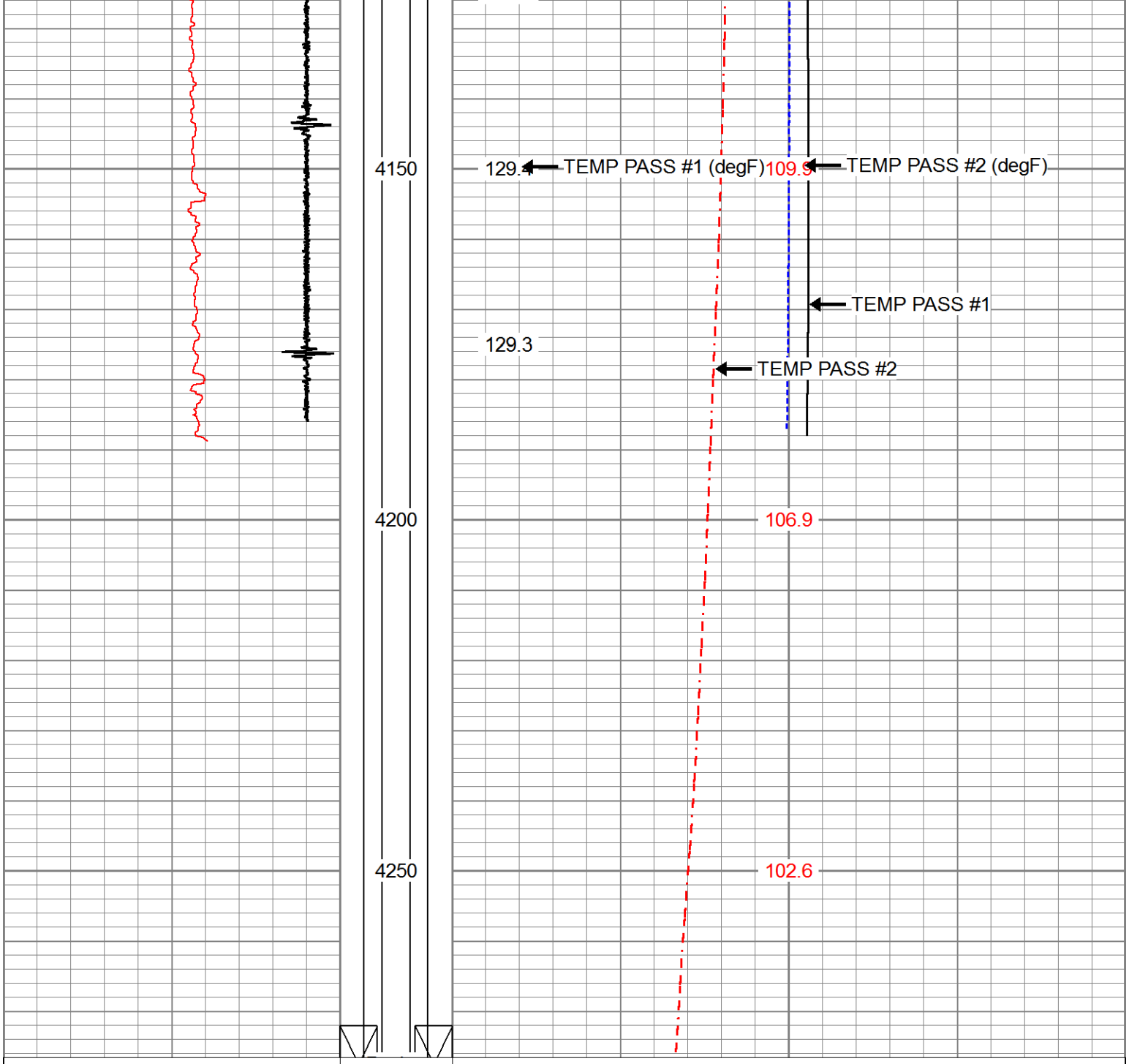

3050
112.0
95.3
112.6
3100
113.0
95.9
113.4
3150
113.9
96.4
114.3
3200
114.6
97.1
115.0


3250
115.3
98.1
115.6
3300
115.9
99.3
116.2
3350
116.5
100.2
116.8
3400
117.1
101.0
117.3
3450
117.6
101.6


117.8
3500
118.1
102.3
118.3
3550
118.6
103.2
118.7
3600
118.9
103.7
119.0
3650
119.3
104.3
119.6


3700
119.7
104.4
119.6
3750
119.9
105.8
120.6
3800
121.7
107.4
122.9
3850
123.7
108.4
124.2
3900
125.2
110.0


126.2
3950
127.0
111.0
127.6
4000
128.0
111.5
128.3
4050
128.7
111.7
128.8
4100
128.9
111.6
129.2



9	CCL	-1
0	LTEN (lb)	1700

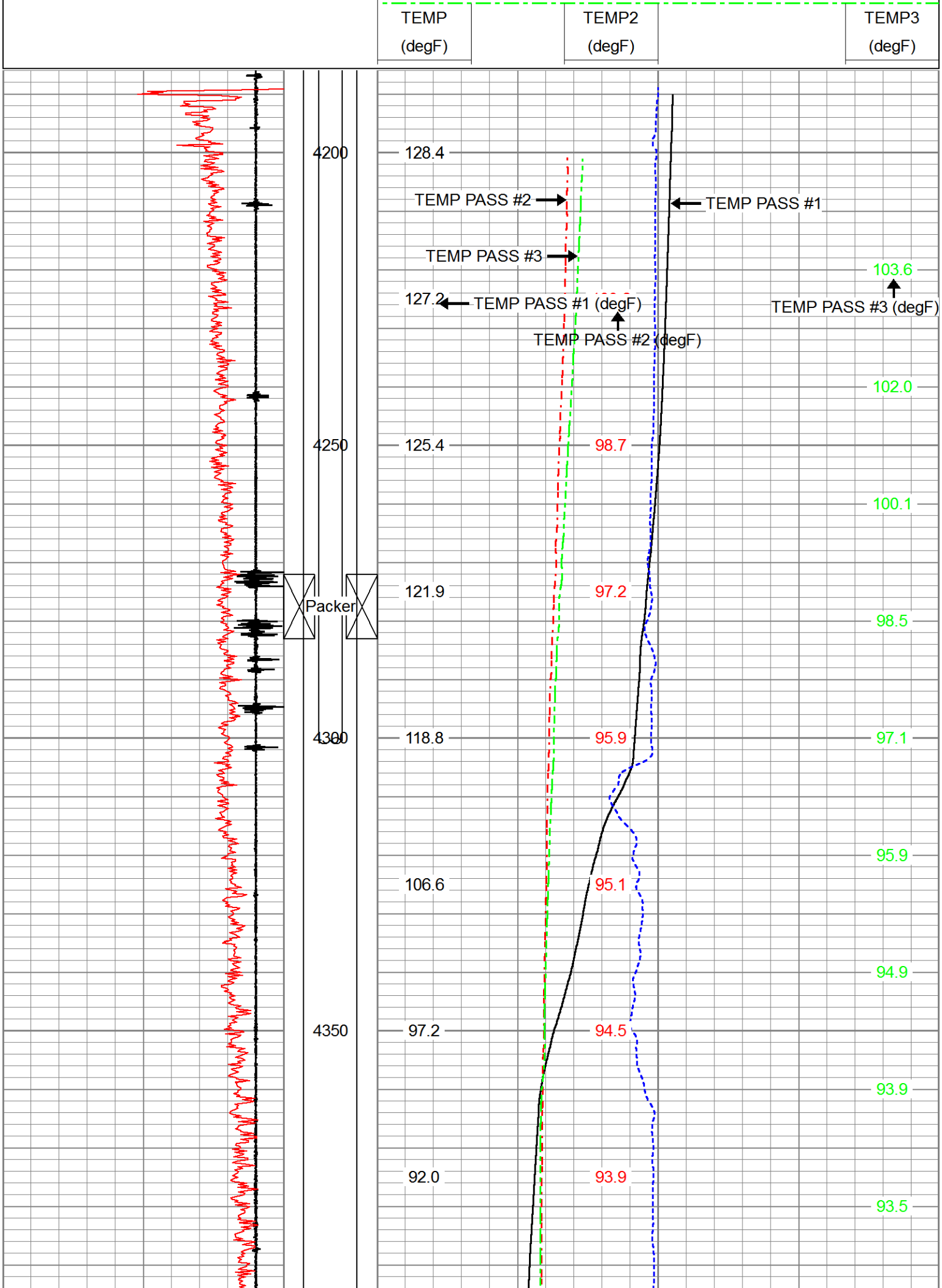
50	TEMP (degF)	200
-5	DTMP (degF)	5
50	TEM2 (degF)	200

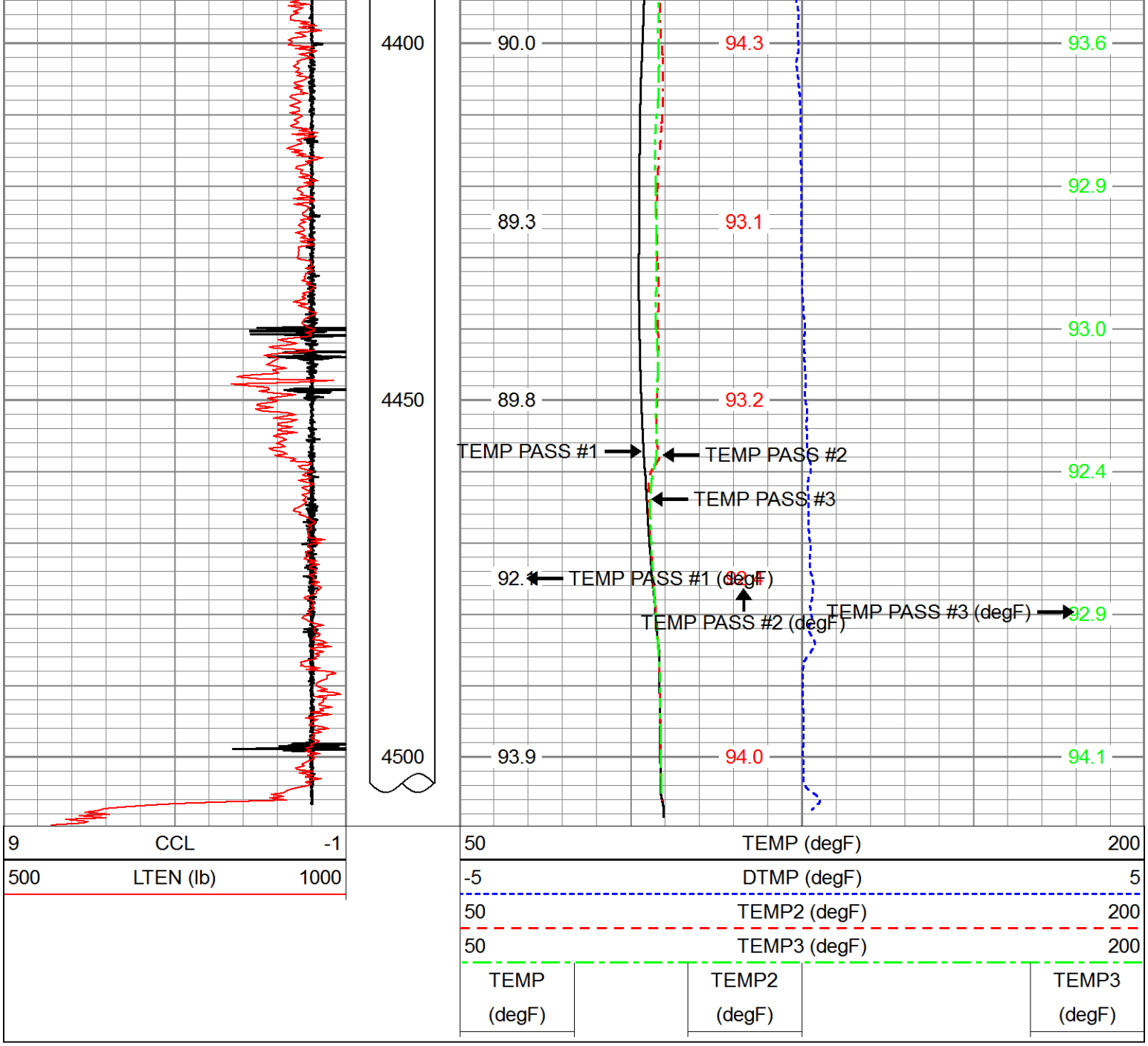
TEMP (degF) TEM2 (degF)

Database File	merrionsunco#1swdtemp.db
Dataset Pathname	pass2.B
Presentation Format	temp
Dataset Creation	Tue Jun 26 13:29:59 2018
Charted by	Depth in Feet scaled 1:240

9	CCL	-1
500	LTEN (lb)	1000

50	TEMP (degF)	200
-5	DTMP (degF)	5
50	TEMP2 (degF)	200
50	TEMP3 (degF)	200


TEMP
(degF)
TEMP2
(degF)
TEMP3
(degF)
4200
4250
4300
4350
128.4
125.4
121.9
118.8
106.6
97.2
92.0
TEMP PASS #2
TEMP PASS #1
TEMP PASS #3
127.2
TEMP PASS #1 (degF)
TEMP PASS #2 (degF)
98.7
97.2
95.9
95.1
94.5
93.9
103.6
TEMP PASS #3 (degF)
102.0
100.1
98.5
97.1
95.9
94.9
93.9
93.5
Packer



Calibration Report

Database File	merrionsunco#1swdtemp.db
Dataset Pathname	pass2.C
Dataset Creation	Tue Jun 26 13:38:22 2018

Temperature Calibration Report

Serial Number:	FW1302-005
Tool Model:	Comprobe
Performed:	Thu Aug 25 10:11:23 2016

Point #	Reading		Reference	
1	723.97	cps	70.00	degF
2	1134.76	cps	118.00	degF
3	1726.70	cps	174.00	degF
4		cps		degF
5		cps		degF
6		cps		degF
7		cps		degF
8		cps		degF

9	cps	degF
10	cps	degF

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT
(TA OR UIC)

Date of Test 10-3-18 Operator AGUA MOSS LLC API # 30-0 45-28653

Property Name Sunco Disposal Well # 1 Location: Unit ___ Sec 2 Twn 29 Rge 12

Land Type:
State ____
Federal ____
Private /
Indian ____

NMOCD
OCT 04 2018
DISTRICT III

Well Type:
Water Injection ____
Salt Water Disposal /
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (Y/N): ____ TA Expires: ____

Casing Pres. 800
Bradenhead Pres. 0
Tubing Pres. 1300
Int. Casing Pres. N/A

Tbg. SI Pres. ____ Tbg. Inj. Pres. ____ Max. Inj. Pres. ____

Pressured annulus up to 1040 psi. for 30 mins. Test passed/failed

REMARKS:
Class I - MIT Prior to Start of Injection for Fall off test. Bled Casing to 0 Prior to MIT
BH-0- during whole test
Approval Comes from Santa Fe Office

By _____ (Operator Representative) Witness Monica Kuehling (NMOCD)

Manager (Position)

Revised 02-11-02

BHP • BU • PI • DD • GWT • RFS • GOR • FL • TS

EFTELLER, INC.

reservoir engineering

FARMINGTON, NEW MEXICO/
GRAND JUNCTION, COLORADO

P. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731
Fax (505) 325-1148

2332 Interstate Ave.
Grand Junction, CO 81505
(970) 241-0403
Fax (970) 241-7634

AGUA MOSS, LLC

SUNCO DISPOSAL NO. 1

OCTOBER 2 – 11, 2018

Customer	AGUA MOSS, LLC
Street	P.O. BOX 600
City/State	FARMINGTON, NM 87499
Country	USA
Service Company	TEFTELLER, INC.
Well Name	SUNCO DISPOSAL NO. 1
Well Location	SAN JUAN COUNTY, NEW MEXICO
Field / Pool	MESA VERDE FORMATION
Status (Oil, Gas, Other)	DISPOSAL
Test Type	INJECTION FALL-OFF TEST
Date of Test	10-2-18
Producing Interval	4350' - 4460'
Recorder Depth	4362'
Recorder Position	4362'
Shut In Date Start:	10-2-2018
Stop:	10-11-2018
Duration:	210 HRS. TANDEM ELEC. MEMORY INST. TIME
Bottom Hole Temperature	

Gauge Identification

Gauge Manufacturer	MICRO-SMART SYSTEMS
Serial Number	262
Model Number	SP2000
Pressure Range	
Battery Type	
Calibration I.D.	
Last Calibration	2/23/18

Gauge Setup Parameters

Probe Set Up Time	10/ 2/18 15:10: 0
Time Delay to First Reading	
Test Type Selection	INJECTION FALL-OFF TEST
Test Duration Selection	210 HRS. TANDEM ELEC. MEMORY INST. TIME

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/02	15:10:00	.0000	.01	74.35		
10/02	15:16:00	6.0000	.01	73.93	.00	
10/02	15:17:00	7.0000	1245.16	73.84	1245.15	PRESSURED UP LUBRICATOR
10/02	15:17:15	7.2500	1250.20	73.80	5.05	
10/02	15:17:30	7.5000	1266.15	73.50	15.95	TRIPPED IN WELL W/TANDEM INSTRUMENTS
10/02	15:17:45	7.7500	1278.95	73.19	12.80	
10/02	15:18:00	8.0000	1292.17	72.89	13.22	
10/02	15:18:15	8.2500	1307.84	72.59	15.67	
10/02	15:18:30	8.5000	1324.37	72.29	16.53	
10/02	15:18:45	8.7500	1343.34	71.98	18.98	
10/02	15:19:00	9.0000	1366.06	71.68	22.71	
10/02	15:19:15	9.2500	1388.34	71.38	22.28	
10/02	15:19:30	9.5000	1409.91	71.08	21.57	
10/02	15:19:45	9.7500	1430.19	70.77	20.28	
10/02	15:20:00	10.0000	1452.19	70.47	22.00	
10/02	15:20:15	10.2500	1474.43	70.02	22.23	
10/02	15:20:30	10.5000	1495.99	69.75	21.56	
10/02	15:20:45	10.7500	1518.71	69.47	22.72	
10/02	15:21:00	11.0000	1546.46	69.20	27.75	
10/02	15:21:15	11.2500	1575.65	68.92	29.19	
10/02	15:21:30	11.5000	1606.86	68.64	31.21	
10/02	15:21:45	11.7500	1635.20	68.37	28.33	
10/02	15:22:00	12.0000	1656.06	68.10	20.87	
10/02	15:22:15	12.2500	1675.78	67.82	19.71	
10/02	15:22:30	12.5000	1695.35	67.55	19.57	
10/02	15:22:45	12.7500	1716.23	67.27	20.88	
10/02	15:23:00	13.0000	1738.11	66.99	21.89	
10/02	15:23:15	13.2500	1759.12	66.97	21.01	
10/02	15:23:30	13.5000	1781.84	67.20	22.72	
10/02	15:23:45	13.7500	1805.57	67.43	23.73	
10/02	15:24:00	14.0000	1828.87	67.65	23.30	
10/02	15:24:15	14.2500	1849.29	67.88	20.42	
10/02	15:24:30	14.5000	1867.55	68.11	18.26	
10/02	15:24:45	14.7500	1886.68	68.33	19.13	
10/02	15:25:00	15.0000	1907.66	68.56	20.99	
10/02	15:25:15	15.2500	1927.79	68.79	20.13	
10/02	15:25:30	15.5000	1948.49	69.01	20.71	
10/02	15:25:45	15.7500	1968.76	69.24	20.27	
10/02	15:26:00	16.0000	1990.03	69.47	21.27	
10/02	15:26:15	16.2500	2013.46	69.90	23.43	
10/02	15:26:30	16.5000	2033.60	70.54	20.14	
10/02	15:26:45	16.7500	2058.19	71.17	24.59	
10/02	15:27:00	17.0000	2082.78	71.80	24.59	
10/02	15:27:15	17.2500	2100.46	72.43	17.68	
10/02	15:27:30	17.5000	2116.84	73.07	16.38	
10/02	15:27:45	17.7500	2134.07	73.71	17.24	
10/02	15:28:00	18.0000	2153.33	74.34	19.25	
10/02	15:28:15	18.2500	2173.29	74.97	19.97	
10/02	15:28:30	18.5000	2193.25	75.61	19.96	
10/02	15:28:45	18.7500	2209.61	76.24	16.37	
10/02	15:29:00	19.0000	2224.10	76.88	14.49	
10/02	15:29:15	19.2500	2242.21	77.68	18.11	
10/02	15:29:30	19.5000	2256.84	78.52	14.63	
10/02	15:29:45	19.7500	2273.76	79.36	16.92	
10/02	15:30:00	20.0000	2295.56	80.21	21.80	
10/02	15:30:15	20.2500	2317.21	81.04	21.65	
10/02	15:30:30	20.5000	2338.84	81.89	21.63	
10/02	15:30:45	20.7500	2360.47	82.73	21.63	
10/02	15:31:00	21.0000	2382.38	83.57	21.91	
10/02	15:31:15	21.2500	2404.86	84.42	22.48	
10/02	15:31:30	21.5000	2427.90	85.26	23.05	
10/02	15:31:45	21.7500	2450.66	86.10	22.75	
10/02	15:32:00	22.0000	2474.83	86.95	24.17	
10/02	15:32:15	22.2500	2498.26	87.82	23.43	
10/02	15:32:30	22.5000	2522.23	88.73	23.97	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/02	15:32:45	22.7500	2550.62	89.65	28.39	
10/02	15:33:00	23.0000	2582.03	90.55	31.41	
10/02	15:33:15	23.2500	2608.83	91.46	26.81	
10/02	15:33:30	23.5000	2635.91	92.38	27.07	
10/02	15:33:45	23.7500	2662.69	93.29	26.78	
10/02	15:34:00	24.0000	2686.46	94.20	23.77	
10/02	15:34:15	24.2500	2712.22	95.11	25.76	
10/02	15:34:30	24.5000	2736.40	96.02	24.19	
10/02	15:34:45	24.7500	2760.14	96.94	23.73	
10/02	15:35:00	25.0000	2784.30	97.86	24.16	
10/02	15:35:15	25.2500	2810.60	98.76	26.30	
10/02	15:35:30	25.5000	2830.23	99.59	19.63	
10/02	15:35:45	25.7500	2848.71	100.42	18.48	
10/02	15:36:00	26.0000	2866.18	101.25	17.47	
10/02	15:36:15	26.2500	2884.22	102.08	18.04	
10/02	15:36:30	26.5000	2901.96	102.91	17.74	
10/02	15:36:45	26.7500	2921.83	103.75	19.87	
10/02	15:37:00	27.0000	2942.28	104.58	20.45	
10/02	15:37:15	27.2500	2964.00	105.41	21.72	
10/02	15:37:30	27.5000	2987.01	106.24	23.00	
10/02	15:37:45	27.7500	3010.14	107.08	23.13	
10/02	15:38:00	28.0000	3029.99	107.90	19.85	
10/02	15:38:15	28.2500	3049.23	108.75	19.25	
10/02	15:38:30	28.5000	3069.53	109.21	20.30	
10/02	15:38:45	28.7500	3088.97	109.68	19.44	
10/02	15:39:00	29.0000	3108.12	110.14	19.14	
10/02	15:39:15	29.2500	3126.69	110.60	18.58	
10/02	15:39:30	29.5000	3141.55	111.06	14.86	
10/02	15:40:00	30.0000	3159.84	111.98	18.29	
10/02	15:40:15	30.2500	3167.13	112.44	7.29	TANDEM INST. @ 4362'
10/02	15:43:15	33.2500	3169.89	109.33	2.76	
10/02	15:45:00	35.0000	3168.61	106.02	-1.27	
10/02	15:47:00	37.0000	3168.01	102.73	-.61	
10/02	15:50:30	40.5000	3167.27	99.72	-.74	
10/02	16:16:00	66.0000	3166.65	97.12	-.62	
10/02	16:42:00	92.0000	3166.53	96.93	-.12	
10/02	17:08:00	118.0000	3166.48	96.90	-.05	
10/02	17:34:00	144.0000	3166.48	96.89	-.01	
10/02	18:00:00	170.0000	3166.40	96.89	-.08	
10/02	18:26:00	196.0000	3166.34	96.88	-.06	
10/02	18:52:00	222.0000	3166.28	96.88	-.06	
10/02	19:18:00	248.0000	3166.25	96.89	-.03	
10/02	19:44:00	274.0000	3166.23	96.88	-.02	
10/02	20:10:00	300.0000	3166.14	96.89	-.09	
10/02	20:36:00	326.0000	3166.11	96.89	-.03	
10/02	21:02:00	352.0000	3166.01	96.89	-.09	
10/02	21:28:00	378.0000	3166.02	96.89	.01	
10/02	21:54:00	404.0000	3165.93	96.89	-.09	
10/02	22:20:00	430.0000	3165.90	96.89	-.03	
10/02	22:46:00	456.0000	3165.85	96.89	-.04	
10/02	23:12:00	482.0000	3165.79	96.90	-.07	
10/02	23:38:00	508.0000	3165.75	96.90	-.04	
10/03	00:04:00	534.0000	3165.64	96.90	-.10	
10/03	00:30:00	560.0000	3165.59	96.90	-.05	
10/03	00:56:00	586.0000	3165.57	96.90	-.02	
10/03	01:22:00	612.0000	3165.55	96.90	-.02	
10/03	01:48:00	638.0000	3165.43	96.90	-.12	
10/03	02:14:00	664.0000	3165.38	96.90	-.04	
10/03	02:40:00	690.0000	3165.32	96.90	-.07	
10/03	03:06:00	716.0000	3165.26	96.90	-.05	
10/03	03:32:00	742.0000	3165.20	96.90	-.07	
10/03	03:58:00	768.0000	3165.14	96.90	-.06	
10/03	04:24:00	794.0000	3165.02	96.90	-.12	
10/03	04:50:00	820.0000	3164.98	96.90	-.04	
10/03	05:16:00	846.0000	3164.90	96.90	-.08	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/03	05:42:00	872.0000	3164.86	96.90	-.03	
10/03	06:08:00	898.0000	3164.80	96.89	-.06	
10/03	06:34:00	924.0000	3164.72	96.90	-.08	
10/03	07:00:00	950.0000	3164.60	96.90	-.12	
10/03	07:26:00	976.0000	3164.56	96.90	-.04	
10/03	07:52:00	1002.0000	3164.41	96.90	-.15	
10/03	08:18:00	1028.0000	3164.53	96.90	.12	
10/03	08:44:00	1054.0000	3164.41	96.92	-.13	
10/03	09:10:00	1080.0000	3164.28	96.88	-.13	
10/03	09:25:00	1095.0000	3164.24	96.90	-.04	BEGAN INJECTION
10/03	09:26:00	1096.0000	3246.62	96.90	82.38	
10/03	09:26:15	1096.2500	3271.53	96.90	24.91	
10/03	09:26:30	1096.5000	3288.45	97.51	16.91	
10/03	09:26:45	1096.7500	3300.49	98.12	12.04	
10/03	09:27:00	1097.0000	3313.80	98.74	13.32	
10/03	09:27:15	1097.2500	3325.98	99.35	12.18	
10/03	09:27:45	1097.7500	3345.59	100.58	19.61	
10/03	09:28:00	1098.0000	3350.32	101.19	4.73	
10/03	09:28:45	1098.7500	3365.62	103.03	15.30	
10/03	09:29:00	1099.0000	3371.62	103.65	6.00	
10/03	09:30:00	1100.0000	3390.68	106.33	19.06	
10/03	09:30:15	1100.2500	3395.10	106.94	4.42	
10/03	09:31:30	1101.5000	3413.92	109.97	18.82	
10/03	09:33:15	1103.2500	3433.17	111.92	19.25	
10/03	09:33:30	1103.5000	3435.64	112.03	2.46	
10/03	09:35:45	1105.7500	3454.23	112.29	18.59	
10/03	09:36:00	1106.0000	3456.24	112.13	2.01	
10/03	09:38:15	1108.2500	3474.33	110.72	18.09	
10/03	09:38:30	1108.5000	3476.42	110.47	2.09	
10/03	09:41:45	1111.7500	3486.73	107.33	10.31	
10/03	09:45:00	1115.0000	3501.21	104.18	14.48	
10/03	09:48:30	1118.5000	3515.84	101.11	14.63	
10/03	09:52:30	1122.5000	3530.83	98.03	14.99	
10/03	09:57:15	1127.2500	3545.75	95.02	14.92	
10/03	10:03:15	1133.2500	3563.28	91.99	17.53	
10/03	10:10:45	1140.7500	3582.79	89.15	19.51	
10/03	10:11:00	1141.0000	3583.36	89.07	.57	
10/03	10:19:45	1149.7500	3602.93	86.78	19.56	
10/03	10:20:00	1150.0000	3603.42	86.72	.49	
10/03	10:30:45	1160.7500	3623.07	84.86	19.66	
10/03	10:31:00	1161.0000	3623.48	84.82	.40	
10/03	10:44:30	1174.5000	3643.19	83.36	19.71	
10/03	10:44:45	1174.7500	3643.48	83.34	.29	
10/03	11:05:45	1195.7500	3663.43	82.13	19.95	
10/03	11:06:00	1196.0000	3663.62	82.13	.19	
10/03	11:28:45	1218.7500	3683.56	81.46	19.95	
10/03	11:29:00	1219.0000	3683.77	81.46	.21	
10/03	11:53:00	1243.0000	3703.15	81.03	19.38	
10/03	11:54:00	1244.0000	3703.96	81.01	.81	
10/03	12:20:00	1270.0000	3721.99	80.71	18.04	
10/03	12:46:00	1296.0000	3736.65	80.50	14.65	
10/03	13:12:00	1322.0000	3749.24	80.33	12.59	
10/03	13:38:00	1348.0000	3760.74	80.18	11.50	
10/03	14:04:00	1374.0000	3771.48	80.07	10.74	
10/03	14:30:00	1400.0000	3779.96	80.00	8.48	
10/03	14:56:00	1426.0000	3788.03	79.99	8.07	
10/03	15:22:00	1452.0000	3795.27	80.01	7.24	
10/03	15:48:00	1478.0000	3802.24	80.07	6.97	
10/03	16:14:00	1504.0000	3808.72	80.13	6.48	
10/03	16:40:00	1530.0000	3814.37	80.18	5.65	
10/03	17:06:00	1556.0000	3820.03	80.25	5.66	
10/03	17:32:00	1582.0000	3825.46	80.31	5.43	
10/03	17:58:00	1608.0000	3830.75	80.35	5.30	
10/03	18:24:00	1634.0000	3835.23	80.34	4.47	
10/03	18:50:00	1660.0000	3839.45	80.30	4.22	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/03	19:16:00	1686.0000	3843.75	80.25	4.30	
10/03	19:42:00	1712.0000	3847.86	80.23	4.11	
10/03	20:08:00	1738.0000	3852.03	80.23	4.18	
10/03	20:34:00	1764.0000	3855.70	80.26	3.66	
10/03	21:00:00	1790.0000	3859.44	80.28	3.74	
10/03	21:26:00	1816.0000	3862.85	80.28	3.41	
10/03	21:52:00	1842.0000	3866.41	80.27	3.56	
10/03	22:18:00	1868.0000	3869.96	80.23	3.55	
10/03	22:44:00	1894.0000	3873.33	80.18	3.37	
10/03	23:10:00	1920.0000	3876.59	80.14	3.25	
10/03	23:36:00	1946.0000	3879.65	80.10	3.07	
10/04	00:02:00	1972.0000	3882.57	80.06	2.92	
10/04	00:28:00	1998.0000	3885.33	80.02	2.76	
10/04	00:54:00	2024.0000	3887.86	79.97	2.53	
10/04	01:20:00	2050.0000	3890.37	79.93	2.51	
10/04	01:46:00	2076.0000	3892.72	79.86	2.35	
10/04	02:12:00	2102.0000	3894.98	79.79	2.27	
10/04	02:38:00	2128.0000	3897.00	79.71	2.02	
10/04	03:04:00	2154.0000	3899.11	79.63	2.11	
10/04	03:30:00	2180.0000	3901.09	79.56	1.98	
10/04	03:56:00	2206.0000	3902.87	79.46	1.78	
10/04	04:22:00	2232.0000	3905.08	79.38	2.21	
10/04	04:48:00	2258.0000	3907.00	79.29	1.92	
10/04	05:14:00	2284.0000	3908.77	79.21	1.77	
10/04	05:40:00	2310.0000	3910.45	79.12	1.67	
10/04	06:06:00	2336.0000	3912.10	79.03	1.66	
10/04	06:32:00	2362.0000	3913.76	78.92	1.66	
10/04	06:58:00	2388.0000	3915.41	78.82	1.65	
10/04	07:24:00	2414.0000	3917.00	78.73	1.59	
10/04	07:50:00	2440.0000	3918.59	78.63	1.59	
10/04	08:16:00	2466.0000	3920.16	78.54	1.56	
10/04	08:42:00	2492.0000	3921.58	78.46	1.43	
10/04	09:08:00	2518.0000	3923.00	78.41	1.42	
10/04	09:34:00	2544.0000	3924.32	78.38	1.32	
10/04	10:00:00	2570.0000	3925.59	78.36	1.27	
10/04	10:26:00	2596.0000	3926.99	78.37	1.40	
10/04	10:52:00	2622.0000	3928.32	78.42	1.33	
10/04	11:18:00	2648.0000	3929.67	78.47	1.34	
10/04	11:44:00	2674.0000	3930.91	78.53	1.24	
10/04	12:10:00	2700.0000	3932.13	78.58	1.22	
10/04	12:36:00	2726.0000	3933.57	78.62	1.44	
10/04	13:02:00	2752.0000	3934.87	78.67	1.30	
10/04	13:28:00	2778.0000	3936.21	78.73	1.33	
10/04	13:54:00	2804.0000	3937.58	78.81	1.37	
10/04	14:20:00	2830.0000	3939.03	78.89	1.45	
10/04	14:46:00	2856.0000	3940.47	78.98	1.44	
10/04	15:12:00	2882.0000	3941.84	79.10	1.38	
10/04	15:38:00	2908.0000	3943.25	79.21	1.40	
10/04	16:04:00	2934.0000	3944.54	79.32	1.29	
10/04	16:30:00	2960.0000	3945.89	79.44	1.35	
10/04	16:56:00	2986.0000	3947.23	79.55	1.34	
10/04	17:22:00	3012.0000	3948.52	79.65	1.29	
10/04	17:48:00	3038.0000	3949.87	79.72	1.35	
10/04	18:14:00	3064.0000	3951.17	79.79	1.30	
10/04	18:40:00	3090.0000	3952.44	79.83	1.27	
10/04	19:06:00	3116.0000	3953.70	79.83	1.27	
10/04	19:32:00	3142.0000	3954.77	79.81	1.07	
10/04	19:58:00	3168.0000	3955.83	79.74	1.06	
10/04	20:24:00	3194.0000	3956.76	79.65	.93	
10/04	20:50:00	3220.0000	3957.65	79.56	.89	
10/04	21:16:00	3246.0000	3958.30	79.44	.65	
10/04	21:42:00	3272.0000	3959.21	79.32	.91	
10/04	22:08:00	3298.0000	3959.98	79.21	.77	
10/04	22:34:00	3324.0000	3960.56	79.12	.58	
10/04	23:00:00	3350.0000	3961.31	79.02	.75	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/04	23:26:00	3376.0000	3961.95	78.93	.64	
10/04	23:52:00	3402.0000	3962.63	78.86	.68	
10/05	00:18:00	3428.0000	3963.26	78.80	.63	
10/05	00:44:00	3454.0000	3963.91	78.70	.64	
10/05	01:10:00	3480.0000	3964.35	78.61	.45	
10/05	01:36:00	3506.0000	3964.86	78.49	.51	
10/05	02:02:00	3532.0000	3972.52	78.40	7.66	
10/05	02:28:00	3558.0000	3975.41	78.30	2.89	
10/05	02:54:00	3584.0000	3977.28	78.20	1.87	
10/05	03:20:00	3610.0000	3978.61	78.10	1.34	
10/05	03:46:00	3636.0000	3979.73	78.01	1.12	
10/05	04:12:00	3662.0000	3980.74	77.93	1.01	
10/05	04:38:00	3688.0000	3981.65	77.85	.90	
10/05	05:04:00	3714.0000	3982.50	77.75	.86	
10/05	05:30:00	3740.0000	3983.31	77.65	.81	
10/05	05:56:00	3766.0000	3983.94	77.55	.63	
10/05	06:22:00	3792.0000	3984.55	77.46	.62	
10/05	06:48:00	3818.0000	3985.14	77.36	.58	
10/05	07:14:00	3844.0000	3985.61	77.26	.47	
10/05	07:40:00	3870.0000	3986.05	77.16	.44	
10/05	08:06:00	3896.0000	3986.55	77.04	.50	
10/05	08:32:00	3922.0000	3987.12	76.94	.57	
10/05	08:58:00	3948.0000	3987.68	76.86	.56	
10/05	09:24:00	3974.0000	3988.16	76.83	.48	
10/05	09:50:00	4000.0000	3988.70	76.83	.54	
10/05	10:16:00	4026.0000	3989.09	76.87	.39	
10/05	10:42:00	4052.0000	3989.41	76.98	.32	
10/05	11:08:00	4078.0000	3989.51	77.11	.10	
10/05	11:34:00	4104.0000	3989.66	77.21	.15	
10/05	12:00:00	4130.0000	3989.86	77.29	.20	END INJECTION - BEGAN FALL-OFF
10/05	12:05:15	4135.2500	3970.18	77.34	-19.68	
10/05	12:05:30	4135.5000	3969.46	77.34	-.72	
10/05	12:16:15	4146.2500	3949.66	78.21	-19.80	
10/05	12:16:30	4146.5000	3949.14	78.24	-.52	
10/05	12:33:15	4163.2500	3929.34	79.58	-19.79	
10/05	12:33:30	4163.5000	3929.14	79.60	-.21	
10/05	12:54:45	4184.7500	3909.22	80.57	-19.92	
10/05	12:55:00	4185.0000	3909.04	80.58	-.18	
10/05	13:21:00	4211.0000	3889.61	81.34	-19.43	
10/05	13:47:00	4237.0000	3873.07	81.99	-16.53	
10/05	14:13:00	4263.0000	3858.24	82.60	-14.84	
10/05	14:39:00	4289.0000	3844.90	83.15	-13.34	
10/05	15:05:00	4315.0000	3832.55	83.64	-12.34	
10/05	15:31:00	4341.0000	3821.19	84.09	-11.37	
10/05	15:57:00	4367.0000	3810.50	84.51	-10.69	
10/05	16:23:00	4393.0000	3800.51	84.88	-9.99	
10/05	16:49:00	4419.0000	3790.87	85.24	-9.64	
10/05	17:15:00	4445.0000	3781.98	85.51	-8.89	
10/05	17:41:00	4471.0000	3773.76	85.76	-8.21	
10/05	18:07:00	4497.0000	3765.56	85.98	-8.21	
10/05	18:33:00	4523.0000	3758.10	86.18	-7.45	
10/05	18:59:00	4549.0000	3750.69	86.37	-7.42	
10/05	19:25:00	4575.0000	3743.92	86.55	-6.76	
10/05	19:51:00	4601.0000	3737.36	86.71	-6.56	
10/05	20:17:00	4627.0000	3731.05	86.88	-6.31	
10/05	20:43:00	4653.0000	3725.06	87.03	-5.99	
10/05	21:09:00	4679.0000	3719.25	87.18	-5.81	
10/05	21:35:00	4705.0000	3713.67	87.30	-5.58	
10/05	22:01:00	4731.0000	3708.35	87.43	-5.31	
10/05	22:27:00	4757.0000	3703.13	87.55	-5.23	
10/05	22:53:00	4783.0000	3698.00	87.67	-5.13	
10/05	23:19:00	4809.0000	3693.09	87.77	-4.91	
10/05	23:45:00	4835.0000	3688.44	87.88	-4.65	
10/06	00:11:00	4861.0000	3683.90	87.98	-4.54	
10/06	00:37:00	4887.0000	3679.50	88.07	-4.40	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/06	01:03:00	4913.0000	3675.23	88.15	-4.27	
10/06	01:29:00	4939.0000	3671.25	88.24	-3.98	
10/06	01:55:00	4965.0000	3667.06	88.33	-4.19	
10/06	02:21:00	4991.0000	3663.15	88.42	-3.91	
10/06	02:47:00	5017.0000	3659.50	88.43	-3.65	
10/06	03:13:00	5043.0000	3655.70	88.52	-3.81	
10/06	03:39:00	5069.0000	3652.03	88.61	-3.67	
10/06	04:05:00	5095.0000	3648.41	88.67	-3.62	
10/06	04:31:00	5121.0000	3645.23	88.73	-3.18	
10/06	04:57:00	5147.0000	3641.74	88.79	-3.49	
10/06	05:23:00	5173.0000	3638.50	88.85	-3.24	
10/06	05:49:00	5199.0000	3635.10	88.90	-3.39	
10/06	06:15:00	5225.0000	3632.11	88.95	-2.99	
10/06	06:41:00	5251.0000	3629.05	88.99	-3.06	
10/06	07:07:00	5277.0000	3625.93	89.04	-3.12	
10/06	07:33:00	5303.0000	3622.90	89.08	-3.03	
10/06	07:59:00	5329.0000	3620.13	89.13	-2.77	
10/06	08:25:00	5355.0000	3617.34	89.17	-2.79	
10/06	08:51:00	5381.0000	3614.51	89.20	-2.83	
10/06	09:17:00	5407.0000	3611.77	89.24	-2.74	
10/06	09:43:00	5433.0000	3609.05	89.28	-2.72	
10/06	10:09:00	5459.0000	3606.40	89.32	-2.65	
10/06	10:35:00	5485.0000	3603.73	89.34	-2.67	
10/06	11:01:00	5511.0000	3601.14	89.39	-2.60	
10/06	11:27:00	5537.0000	3598.63	89.41	-2.51	
10/06	11:53:00	5563.0000	3596.12	89.44	-2.51	
10/06	12:19:00	5589.0000	3593.63	89.48	-2.48	
10/06	12:45:00	5615.0000	3591.25	89.51	-2.38	
10/06	13:11:00	5641.0000	3588.87	89.54	-2.38	
10/06	13:37:00	5667.0000	3586.48	89.58	-2.39	
10/06	14:03:00	5693.0000	3584.22	89.62	-2.26	
10/06	14:29:00	5719.0000	3581.96	89.65	-2.26	
10/06	14:55:00	5745.0000	3579.75	89.69	-2.21	
10/06	15:21:00	5771.0000	3577.52	89.72	-2.22	
10/06	15:47:00	5797.0000	3575.27	89.75	-2.26	
10/06	16:13:00	5823.0000	3573.14	89.80	-2.12	
10/06	16:39:00	5849.0000	3570.96	89.83	-2.18	
10/06	17:05:00	5875.0000	3568.94	89.86	-2.02	
10/06	17:31:00	5901.0000	3566.86	89.89	-2.09	
10/06	17:57:00	5927.0000	3564.78	89.93	-2.08	
10/06	18:23:00	5953.0000	3562.79	89.96	-1.98	
10/06	18:49:00	5979.0000	3560.75	89.98	-2.04	
10/06	19:15:00	6005.0000	3558.75	90.01	-2.00	
10/06	19:41:00	6031.0000	3556.74	90.04	-2.01	
10/06	20:07:00	6057.0000	3554.78	90.07	-1.96	
10/06	20:33:00	6083.0000	3552.85	90.10	-1.93	
10/06	20:59:00	6109.0000	3550.92	90.12	-1.93	
10/06	21:25:00	6135.0000	3549.03	90.15	-1.89	
10/06	21:51:00	6161.0000	3547.16	90.17	-1.88	
10/06	22:17:00	6187.0000	3545.27	90.19	-1.89	
10/06	22:43:00	6213.0000	3543.46	90.21	-1.81	
10/06	23:09:00	6239.0000	3541.65	90.24	-1.81	
10/06	23:35:00	6265.0000	3539.88	90.27	-1.77	
10/07	00:01:00	6291.0000	3538.08	90.29	-1.81	
10/07	00:27:00	6317.0000	3536.34	90.31	-1.73	
10/07	00:53:00	6343.0000	3534.60	90.34	-1.74	
10/07	01:19:00	6369.0000	3532.98	90.37	-1.62	
10/07	01:45:00	6395.0000	3531.21	90.40	-1.77	
10/07	02:11:00	6421.0000	3529.50	90.42	-1.71	
10/07	02:37:00	6447.0000	3527.84	90.44	-1.66	
10/07	03:03:00	6473.0000	3526.20	90.47	-1.64	
10/07	03:29:00	6499.0000	3524.63	90.48	-1.57	
10/07	03:55:00	6525.0000	3523.00	90.51	-1.63	
10/07	04:21:00	6551.0000	3521.40	90.52	-1.60	
10/07	04:47:00	6577.0000	3519.79	90.55	-1.61	

COMPANY: AGUA MOSS, LLC

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Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/07	05:13:00	6603.0000	3518.25	90.57	-1.54	
10/07	05:39:00	6629.0000	3516.66	90.59	-1.60	
10/07	06:05:00	6655.0000	3515.15	90.61	-1.51	
10/07	06:31:00	6681.0000	3513.60	90.63	-1.55	
10/07	06:57:00	6707.0000	3512.03	90.66	-1.57	
10/07	07:23:00	6733.0000	3510.53	90.68	-1.50	
10/07	07:49:00	6759.0000	3509.01	90.70	-1.52	
10/07	08:15:00	6785.0000	3507.50	90.72	-1.51	
10/07	08:41:00	6811.0000	3505.97	90.75	-1.53	
10/07	09:07:00	6837.0000	3504.49	90.75	-1.48	
10/07	09:33:00	6863.0000	3503.07	90.79	-1.42	
10/07	09:59:00	6889.0000	3501.89	90.80	-1.18	
10/07	10:25:00	6915.0000	3500.52	90.88	-1.37	
10/07	10:51:00	6941.0000	3499.16	90.92	-1.36	
10/07	11:17:00	6967.0000	3497.71	90.92	-1.45	
10/07	11:43:00	6993.0000	3496.33	90.95	-1.38	
10/07	12:09:00	7019.0000	3495.05	90.97	-1.28	
10/07	12:35:00	7045.0000	3493.66	90.99	-1.39	
10/07	13:01:00	7071.0000	3492.32	91.00	-1.33	
10/07	13:27:00	7097.0000	3491.05	91.03	-1.28	
10/07	13:53:00	7123.0000	3489.66	91.05	-1.39	
10/07	14:19:00	7149.0000	3488.38	91.07	-1.29	
10/07	14:45:00	7175.0000	3487.16	91.08	-1.21	
10/07	15:11:00	7201.0000	3485.81	91.10	-1.35	
10/07	15:37:00	7227.0000	3484.60	91.11	-1.21	
10/07	16:03:00	7253.0000	3483.36	91.14	-1.24	
10/07	16:29:00	7279.0000	3482.10	91.14	-1.26	
10/07	16:55:00	7305.0000	3480.89	91.17	-1.22	
10/07	17:21:00	7331.0000	3479.62	91.18	-1.27	
10/07	17:47:00	7357.0000	3478.35	91.20	-1.27	
10/07	18:13:00	7383.0000	3477.16	91.22	-1.19	
10/07	18:39:00	7409.0000	3475.95	91.23	-1.22	
10/07	19:05:00	7435.0000	3474.72	91.25	-1.23	
10/07	19:31:00	7461.0000	3473.45	91.27	-1.27	
10/07	19:57:00	7487.0000	3472.25	91.29	-1.20	
10/07	20:23:00	7513.0000	3471.04	91.32	-1.21	
10/07	20:49:00	7539.0000	3469.91	91.32	-1.13	
10/07	21:15:00	7565.0000	3468.67	91.34	-1.23	
10/07	21:41:00	7591.0000	3467.53	91.35	-1.15	
10/07	22:07:00	7617.0000	3466.36	91.37	-1.17	
10/07	22:33:00	7643.0000	3465.16	91.39	-1.20	
10/07	22:59:00	7669.0000	3464.02	91.41	-1.14	
10/07	23:25:00	7695.0000	3462.91	91.42	-1.11	
10/07	23:51:00	7721.0000	3461.72	91.44	-1.19	
10/08	00:17:00	7747.0000	3460.63	91.45	-1.08	
10/08	00:43:00	7773.0000	3459.53	91.47	-1.11	
10/08	01:09:00	7799.0000	3458.46	91.49	-1.07	
10/08	01:35:00	7825.0000	3457.39	91.50	-1.06	
10/08	02:01:00	7851.0000	3456.31	91.51	-1.08	
10/08	02:27:00	7877.0000	3455.26	91.53	-1.05	
10/08	02:53:00	7903.0000	3454.20	91.54	-1.06	
10/08	03:19:00	7929.0000	3453.16	91.56	-1.04	
10/08	03:45:00	7955.0000	3452.21	91.56	-.95	
10/08	04:11:00	7981.0000	3451.21	91.58	-1.00	
10/08	04:37:00	8007.0000	3450.14	91.61	-1.07	
10/08	05:03:00	8033.0000	3449.12	91.63	-1.01	
10/08	05:29:00	8059.0000	3448.14	91.64	-.99	
10/08	05:55:00	8085.0000	3447.10	91.66	-1.03	
10/08	06:21:00	8111.0000	3446.09	91.67	-1.01	
10/08	06:47:00	8137.0000	3445.13	91.69	-.96	
10/08	07:13:00	8163.0000	3444.11	91.70	-1.02	
10/08	07:39:00	8189.0000	3443.10	91.71	-1.00	
10/08	08:05:00	8215.0000	3442.08	91.72	-1.02	
10/08	08:31:00	8241.0000	3441.06	91.75	-1.02	
10/08	08:57:00	8267.0000	3440.15	91.75	-.91	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: P262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/08	09:23:00	8293.0000	3439.13	91.77	-1.01	
10/08	09:49:00	8319.0000	3438.14	91.79	-1.00	
10/08	10:15:00	8345.0000	3437.15	91.79	-.99	
10/08	10:41:00	8371.0000	3436.20	91.82	-.95	
10/08	11:07:00	8397.0000	3435.26	91.83	-.94	
10/08	11:33:00	8423.0000	3434.29	91.84	-.98	
10/08	11:59:00	8449.0000	3433.40	91.86	-.89	
10/08	12:25:00	8475.0000	3432.60	91.86	-.80	
10/08	12:51:00	8501.0000	3431.64	91.88	-.95	
10/08	13:17:00	8527.0000	3430.73	91.89	-.91	
10/08	13:43:00	8553.0000	3429.79	91.91	-.94	
10/08	14:09:00	8579.0000	3428.95	91.92	-.84	
10/08	14:35:00	8605.0000	3428.01	91.93	-.94	
10/08	15:01:00	8631.0000	3427.19	91.94	-.82	
10/08	15:27:00	8657.0000	3426.31	91.96	-.89	
10/08	15:53:00	8683.0000	3425.46	91.97	-.84	
10/08	16:19:00	8709.0000	3424.57	91.99	-.89	
10/08	16:45:00	8735.0000	3423.72	92.00	-.85	
10/08	17:11:00	8761.0000	3422.94	92.00	-.78	
10/08	17:37:00	8787.0000	3422.11	92.03	-.83	
10/08	18:03:00	8813.0000	3421.22	92.03	-.89	
10/08	18:29:00	8839.0000	3420.42	92.05	-.79	
10/08	18:55:00	8865.0000	3419.54	92.06	-.88	
10/08	19:21:00	8891.0000	3418.73	92.07	-.81	
10/08	19:47:00	8917.0000	3417.83	92.09	-.90	
10/08	20:13:00	8943.0000	3416.96	92.10	-.87	
10/08	20:39:00	8969.0000	3416.16	92.12	-.80	
10/08	21:05:00	8995.0000	3415.29	92.13	-.87	
10/08	21:31:00	9021.0000	3414.50	92.13	-.78	
10/08	21:57:00	9047.0000	3413.67	92.15	-.84	
10/08	22:23:00	9073.0000	3412.80	92.17	-.86	
10/08	22:49:00	9099.0000	3412.03	92.18	-.78	
10/08	23:15:00	9125.0000	3411.23	92.19	-.80	
10/08	23:41:00	9151.0000	3410.38	92.20	-.84	
10/09	00:07:00	9177.0000	3409.58	92.22	-.80	
10/09	00:33:00	9203.0000	3408.75	92.22	-.83	
10/09	00:59:00	9229.0000	3408.00	92.24	-.75	
10/09	01:25:00	9255.0000	3407.23	92.25	-.77	
10/09	01:51:00	9281.0000	3406.46	92.27	-.78	
10/09	02:17:00	9307.0000	3405.67	92.27	-.78	
10/09	02:43:00	9333.0000	3404.96	92.29	-.71	
10/09	03:09:00	9359.0000	3404.23	92.30	-.73	
10/09	03:35:00	9385.0000	3403.48	92.29	-.75	
10/09	04:01:00	9411.0000	3402.75	92.32	-.73	
10/09	04:27:00	9437.0000	3402.06	92.32	-.69	
10/09	04:53:00	9463.0000	3401.27	92.34	-.79	
10/09	05:19:00	9489.0000	3400.52	92.36	-.75	
10/09	05:45:00	9515.0000	3399.83	92.36	-.69	
10/09	06:11:00	9541.0000	3399.10	92.39	-.73	
10/09	06:37:00	9567.0000	3398.34	92.39	-.76	
10/09	07:03:00	9593.0000	3397.62	92.40	-.72	
10/09	07:29:00	9619.0000	3396.87	92.41	-.75	
10/09	07:55:00	9645.0000	3396.19	92.41	-.68	
10/09	08:21:00	9671.0000	3395.42	92.43	-.77	
10/09	08:47:00	9697.0000	3394.71	92.44	-.71	
10/09	09:13:00	9723.0000	3393.94	92.46	-.77	
10/09	09:39:00	9749.0000	3393.24	92.46	-.70	
10/09	10:05:00	9775.0000	3392.50	92.47	-.74	
10/09	10:31:00	9801.0000	3391.84	92.48	-.66	
10/09	10:57:00	9827.0000	3391.10	92.50	-.74	
10/09	11:23:00	9853.0000	3390.35	92.50	-.75	
10/09	11:49:00	9879.0000	3389.67	92.52	-.68	
10/09	12:15:00	9905.0000	3389.00	92.53	-.67	
10/09	12:41:00	9931.0000	3388.32	92.54	-.68	
10/09	13:07:00	9957.0000	3387.71	92.54	-.62	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/09	13:33:00	9983.0000	3386.99	92.57	-.72	
10/09	13:59:00	10009.0000	3386.27	92.58	-.72	
10/09	14:25:00	10035.0000	3385.66	92.58	-.61	
10/09	14:51:00	10061.0000	3385.01	92.60	-.65	
10/09	15:17:00	10087.0000	3384.38	92.60	-.63	
10/09	15:43:00	10113.0000	3383.76	92.61	-.62	
10/09	16:09:00	10139.0000	3383.15	92.63	-.62	
10/09	16:35:00	10165.0000	3382.51	92.63	-.63	
10/09	17:01:00	10191.0000	3381.90	92.64	-.61	
10/09	17:27:00	10217.0000	3381.27	92.65	-.63	
10/09	17:53:00	10243.0000	3380.66	92.66	-.61	
10/09	18:19:00	10269.0000	3380.04	92.66	-.62	
10/09	18:45:00	10295.0000	3379.43	92.68	-.61	
10/09	19:11:00	10321.0000	3378.80	92.69	-.63	
10/09	19:37:00	10347.0000	3378.20	92.70	-.60	
10/09	20:03:00	10373.0000	3377.56	92.71	-.63	
10/09	20:29:00	10399.0000	3376.95	92.72	-.61	
10/09	20:55:00	10425.0000	3376.29	92.73	-.66	
10/09	21:21:00	10451.0000	3375.68	92.74	-.61	
10/09	21:47:00	10477.0000	3375.06	92.76	-.63	
10/09	22:13:00	10503.0000	3374.44	92.76	-.62	
10/09	22:39:00	10529.0000	3373.83	92.78	-.61	
10/09	23:05:00	10555.0000	3373.22	92.78	-.61	
10/09	23:31:00	10581.0000	3372.62	92.79	-.60	
10/09	23:57:00	10607.0000	3371.99	92.80	-.63	
10/10	00:23:00	10633.0000	3371.40	92.82	-.58	
10/10	00:49:00	10659.0000	3370.81	92.82	-.59	
10/10	01:15:00	10685.0000	3370.25	92.82	-.56	
10/10	01:41:00	10711.0000	3369.69	92.84	-.56	
10/10	02:07:00	10737.0000	3369.06	92.84	-.63	
10/10	02:33:00	10763.0000	3368.53	92.86	-.53	
10/10	02:59:00	10789.0000	3367.99	92.87	-.54	
10/10	03:25:00	10815.0000	3367.43	92.88	-.57	
10/10	03:51:00	10841.0000	3366.91	92.89	-.52	
10/10	04:17:00	10867.0000	3366.33	92.89	-.58	
10/10	04:43:00	10893.0000	3365.80	92.91	-.53	
10/10	05:09:00	10919.0000	3365.25	92.91	-.55	
10/10	05:35:00	10945.0000	3364.75	92.92	-.50	
10/10	06:01:00	10971.0000	3364.07	92.93	-.68	
10/10	06:27:00	10997.0000	3363.56	92.93	-.51	
10/10	06:53:00	11023.0000	3363.16	92.95	-.41	
10/10	07:19:00	11049.0000	3362.86	92.96	-.29	
10/10	07:45:00	11075.0000	3362.25	92.96	-.61	
10/10	08:11:00	11101.0000	3361.60	92.98	-.65	
10/10	08:37:00	11127.0000	3361.11	92.98	-.49	
10/10	09:03:00	11153.0000	3360.53	92.99	-.58	
10/10	09:29:00	11179.0000	3359.98	93.00	-.55	
10/10	09:55:00	11205.0000	3359.47	93.01	-.51	
10/10	10:21:00	11231.0000	3358.89	93.01	-.58	
10/10	10:47:00	11257.0000	3358.33	93.03	-.57	
10/10	11:13:00	11283.0000	3357.81	93.03	-.51	
10/10	11:39:00	11309.0000	3357.33	93.05	-.49	
10/10	12:05:00	11335.0000	3356.78	93.05	-.54	
10/10	12:31:00	11361.0000	3356.24	93.07	-.54	
10/10	12:57:00	11387.0000	3355.79	93.07	-.45	
10/10	13:23:00	11413.0000	3355.25	93.07	-.55	
10/10	13:49:00	11439.0000	3354.76	93.09	-.49	
10/10	14:15:00	11465.0000	3354.22	93.09	-.54	
10/10	14:41:00	11491.0000	3353.72	93.11	-.50	
10/10	15:07:00	11517.0000	3353.24	93.12	-.48	
10/10	15:33:00	11543.0000	3352.73	93.12	-.51	
10/10	15:59:00	11569.0000	3352.31	93.13	-.42	
10/10	16:25:00	11595.0000	3351.78	93.13	-.53	
10/10	16:51:00	11621.0000	3351.31	93.14	-.47	
10/10	17:17:00	11647.0000	3350.88	93.15	-.43	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/10	17:43:00	11673.0000	3350.34	93.17	-.54	
10/10	18:09:00	11699.0000	3349.87	93.17	-.47	
10/10	18:35:00	11725.0000	3349.39	93.17	-.48	
10/10	19:01:00	11751.0000	3348.99	93.18	-.40	
10/10	19:27:00	11777.0000	3348.48	93.19	-.51	
10/10	19:53:00	11803.0000	3347.98	93.20	-.49	
10/10	20:19:00	11829.0000	3347.54	93.21	-.44	
10/10	20:45:00	11855.0000	3346.98	93.21	-.56	
10/10	21:11:00	11881.0000	3346.53	93.23	-.46	
10/10	21:37:00	11907.0000	3346.06	93.22	-.46	
10/10	22:03:00	11933.0000	3345.60	93.24	-.46	
10/10	22:29:00	11959.0000	3345.11	93.24	-.49	
10/10	22:55:00	11985.0000	3344.63	93.25	-.48	
10/10	23:21:00	12011.0000	3344.16	93.26	-.47	
10/10	23:47:00	12037.0000	3343.62	93.27	-.53	
10/11	00:13:00	12063.0000	3343.19	93.27	-.43	
10/11	00:39:00	12089.0000	3342.74	93.28	-.46	
10/11	01:05:00	12115.0000	3342.30	93.29	-.44	
10/11	01:31:00	12141.0000	3341.87	93.29	-.43	
10/11	01:57:00	12167.0000	3341.39	93.31	-.48	
10/11	02:23:00	12193.0000	3340.97	93.31	-.42	
10/11	02:49:00	12219.0000	3340.52	93.31	-.45	
10/11	03:15:00	12245.0000	3340.05	93.33	-.47	
10/11	03:41:00	12271.0000	3339.67	93.33	-.39	
10/11	04:07:00	12297.0000	3339.21	93.33	-.46	
10/11	04:33:00	12323.0000	3338.83	93.35	-.38	
10/11	04:59:00	12349.0000	3338.33	93.36	-.50	
10/11	05:25:00	12375.0000	3337.97	93.36	-.36	
10/11	05:51:00	12401.0000	3337.57	93.37	-.40	
10/11	06:17:00	12427.0000	3337.13	93.38	-.44	
10/11	06:43:00	12453.0000	3336.72	93.39	-.41	
10/11	07:09:00	12479.0000	3336.25	93.39	-.47	
10/11	07:35:00	12505.0000	3335.87	93.40	-.38	
10/11	08:01:00	12531.0000	3335.51	93.40	-.36	
10/11	08:20:00	12550.0000	3326.01	93.40	-9.50	END FALL-OFF
10/11	08:20:15	12550.2500	3312.85	93.38	-13.17	
10/11	08:20:30	12550.5000	3296.73	94.08	-16.11	
10/11	08:20:45	12550.7500	3280.04	94.79	-16.69	
10/11	08:21:00	12551.0000	3262.50	95.50	-17.55	
10/11	08:21:15	12551.2500	3244.38	96.21	-18.12	
10/11	08:21:30	12551.5000	3226.14	96.91	-18.24	
10/11	08:21:45	12551.7500	3207.74	97.62	-18.39	
10/11	08:22:00	12552.0000	3190.78	98.33	-16.96	
10/11	08:22:15	12552.2500	3177.27	99.04	-13.52	
10/11	08:23:15	12553.2500	3172.54	102.27	-4.72	
10/11	08:24:15	12554.2500	3174.82	105.89	2.28	
10/11	08:25:15	12555.2500	3175.35	109.50	.53	
10/11	08:26:15	12556.2500	3175.81	112.88	.46	STOP @ 4000'
10/11	08:28:00	12558.0000	3177.07	116.13	1.26	
10/11	08:29:45	12559.7500	3157.31	118.58	-19.76	
10/11	08:30:00	12560.0000	3140.07	118.73	-17.25	
10/11	08:30:15	12560.2500	3120.56	118.86	-19.51	
10/11	08:30:30	12560.5000	3096.76	119.00	-23.79	
10/11	08:30:45	12560.7500	3069.26	119.14	-27.51	
10/11	08:31:00	12561.0000	3040.05	119.29	-29.21	
10/11	08:31:15	12561.2500	3007.72	119.42	-32.33	
10/11	08:31:30	12561.5000	2972.53	119.56	-35.19	
10/11	08:31:45	12561.7500	2936.49	119.71	-36.05	
10/11	08:32:00	12562.0000	2897.33	119.84	-39.16	
10/11	08:32:15	12562.2500	2857.97	119.71	-39.36	
10/11	08:32:30	12562.5000	2818.49	119.39	-39.48	
10/11	08:32:45	12562.7500	2778.57	119.08	-39.92	
10/11	08:33:00	12563.0000	2750.76	118.77	-27.81	
10/11	08:35:30	12565.5000	2745.47	115.58	-5.29	
10/11	08:38:15	12568.2500	2744.49	112.45	-.98	

COMPANY: AGUA MOSS, LLC

WELL NAME : SUNCO DISPOSAL NO. 1

DATE : 10/11/18

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
10/11	08:39:15	12569.2500	2744.46	111.67	-.03	
10/11	08:39:30	12569.5000	2723.65	111.48	-20.81	
10/11	08:39:45	12569.7500	2690.55	111.29	-33.10	
10/11	08:40:00	12570.0000	2654.32	111.10	-36.24	
10/11	08:40:15	12570.2500	2617.66	110.90	-36.66	
10/11	08:40:30	12570.5000	2580.13	110.71	-37.52	
10/11	08:40:45	12570.7500	2542.75	110.52	-37.38	
10/11	08:41:00	12571.0000	2504.09	110.32	-38.66	
10/11	08:41:15	12571.2500	2464.94	110.01	-39.15	
10/11	08:41:30	12571.5000	2427.11	109.46	-37.83	
10/11	08:41:45	12571.7500	2394.85	108.90	-32.26	
10/11	08:42:00	12572.0000	2361.44	108.34	-33.41	
10/11	08:42:15	12572.2500	2334.88	107.79	-26.56	
10/11	08:42:30	12572.5000	2319.44	107.23	-15.44	
10/11	08:42:45	12572.7500	2312.72	106.67	-6.72	
10/11	08:44:15	12574.2500	2311.91	103.28	-.81	
10/11	08:46:00	12576.0000	2310.60	99.89	-1.31	
10/11	08:48:00	12578.0000	2309.83	96.82	-.77	STOP @ 2000'
10/11	08:49:15	12579.2500	2309.63	95.52	-.21	
10/11	08:49:30	12579.5000	2289.85	95.26	-19.77	
10/11	08:49:45	12579.7500	2247.39	95.00	-42.46	
10/11	08:50:00	12580.0000	2197.63	94.74	-49.76	
10/11	08:50:15	12580.2500	2147.01	94.47	-50.62	
10/11	08:50:30	12580.5000	2095.92	93.85	-51.10	
10/11	08:50:45	12580.7500	2049.10	93.24	-46.82	
10/11	08:51:00	12581.0000	2013.01	92.63	-36.09	
10/11	08:51:15	12581.2500	1978.05	92.01	-34.96	
10/11	08:51:30	12581.5000	1948.68	91.39	-29.37	
10/11	08:51:45	12581.7500	1926.74	90.78	-21.94	
10/11	08:52:00	12582.0000	1905.36	90.17	-21.37	
10/11	08:52:15	12582.2500	1883.13	89.56	-22.23	
10/11	08:53:30	12583.5000	1876.84	86.22	-6.29	
10/11	08:54:45	12584.7500	1875.83	82.81	-1.00	
10/11	08:56:00	12586.0000	1875.11	79.42	-.72	STOP @ 1000'
10/11	08:58:00	12588.0000	1874.27	76.28	-.84	
10/11	08:59:15	12589.2500	1873.95	74.54	-.31	
10/11	08:59:30	12589.5000	1845.15	74.23	-28.81	
10/11	08:59:45	12589.7500	1799.81	73.92	-45.34	
10/11	09:00:00	12590.0000	1762.08	73.62	-37.73	
10/11	09:00:15	12590.2500	1739.14	73.31	-22.94	
10/11	09:00:30	12590.5000	1715.06	73.00	-24.09	
10/11	09:00:45	12590.7500	1680.19	72.70	-34.87	
10/11	09:01:00	12591.0000	1634.69	72.39	-45.49	
10/11	09:01:15	12591.2500	1586.17	72.09	-48.52	
10/11	09:01:30	12591.5000	1540.53	71.78	-45.65	
10/11	09:01:45	12591.7500	1507.23	71.47	-33.30	
10/11	09:02:00	12592.0000	1482.11	71.17	-25.11	
10/11	09:02:15	12592.2500	1464.83	70.73	-17.28	
10/11	09:02:30	12592.5000	1450.61	70.21	-14.22	
10/11	09:04:00	12594.0000	1439.64	67.10	-10.97	
10/11	09:05:30	12595.5000	1439.76	64.03	.12	
10/11	09:07:15	12597.2500	1439.15	60.89	-.61	
10/11	09:09:30	12599.5000	1438.68	57.81	-.47	SURFACE STOP
10/11	09:11:00	12601.0000	1442.52	56.15	3.84	
10/11	09:11:15	12601.2500	.01	55.89	-1442.51	
10/11	09:15:00	12605.0000	.01	52.29	.00	

EVENT SUMMARY

COMPANY : AGUA MOSS, LLC

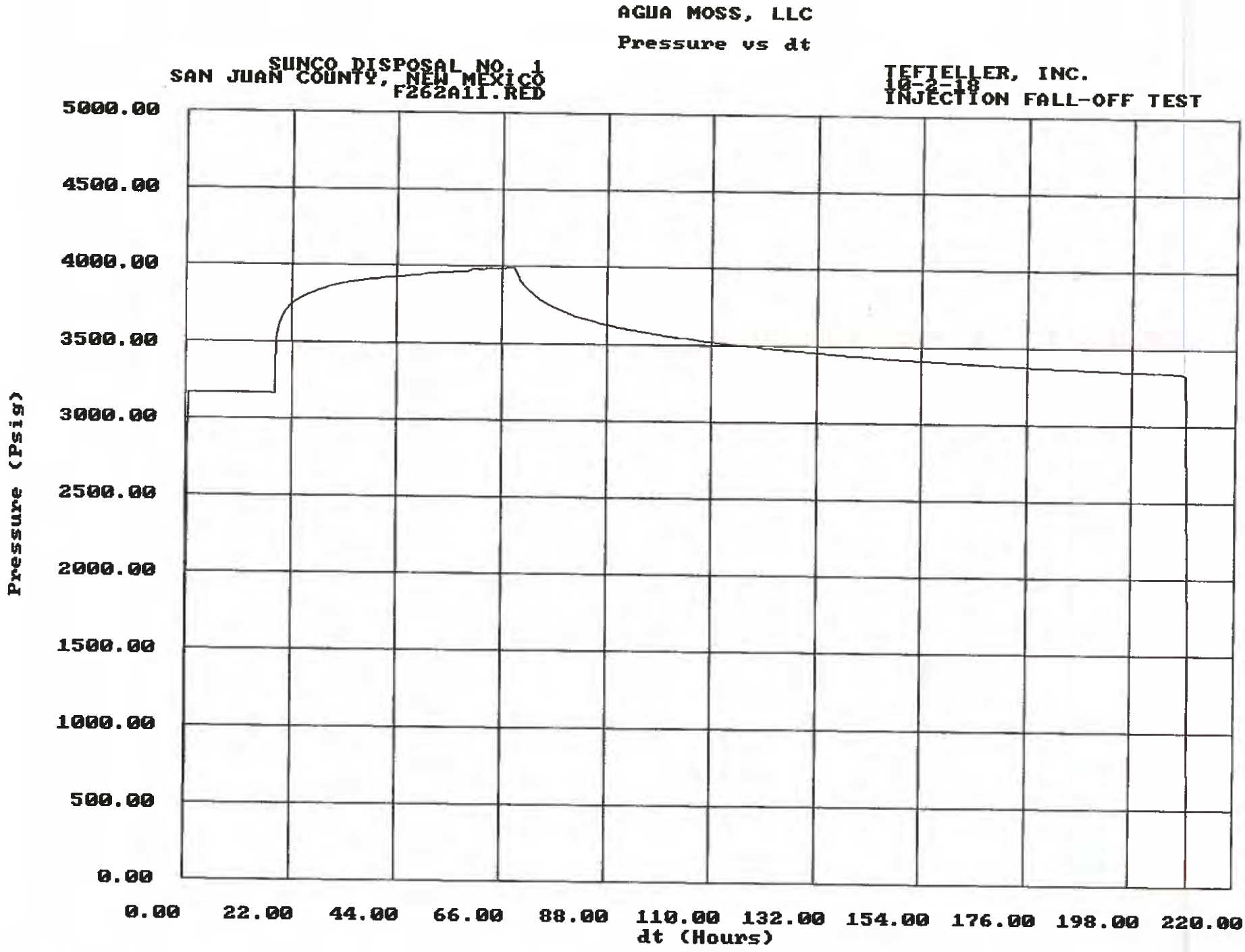
WELL NAME : SUNCO DISPOSAL NO. 1

WELL LOCATION : SAN JUAN COUNTY, NEW MEXICO

DATE : 10/11/18

FILE REF: F262A11.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Key Event	Pressure Psig	Temp Deg F
10/02	15:17:00	7.0000	PRESSURED UP LUBRICATOR	1245.16	73.84
10/02	15:17:30	7.5000	TRIPPED IN WELL W/TANDEM INSTRUMENTS	1266.15	73.50
10/02	15:40:15	30.2500	TANDEM INST. @ 4362'	3167.13	112.44
10/03	09:25:00	1095.0000	BEGAN INJECTION	3164.24	96.90
10/05	12:00:00	4130.0000	END INJECTION - BEGAN FALL-OFF	3989.86	77.29
10/11	08:20:00	12550.0000	END FALL-OFF	3326.01	93.40
10/11	08:26:15	12556.2500	STOP @ 4000'	3175.81	112.88
10/11	08:48:00	12578.0000	STOP @ 2000'	2309.83	96.82
10/11	08:56:00	12586.0000	STOP @ 1000'	1875.11	79.42
10/11	09:09:30	12599.5000	SURFACE STOP	1438.68	57.81


AGUA MOSS, LLC
Pressure vs dt
SUNCO DISPOSAL NO. 1
SAN JUAN COUNTY, NEW MEXICO
F262A11.RED
TEFTELLER, INC.
10-2-18
INJECTION FALL-OFF TEST
5000.00
4500.00
4000.00
3500.00
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
Pressure (Psig)
0.00
22.00
44.00
66.00
88.00
110.00
132.00
154.00
176.00
198.00
220.00
dt (Hours)

Company: AGUA MOSS, LLC
Well: SUNCO DISPOSAL NO. 1
Field: MESA VERDE FORMATION
Engineer: NEIL TEFTELLER
Gauge Type: ELECTRONIC MEMORY
Gauge Range: 0 - 5000
Gauge Depth: 4362 ft
Serial No.: 262

County: SAN JUAN
State: NEW MEXICO
Date: 10/11/2018
Well Type: DISPOSAL
Test Type: GRADIENT
Status: SHUT IN
File Name: 67495

Tubing: 2-7/8" TO 4282'
Tubing: TO
Casing: 5-1/2" TO 4750'
Perfs.: 4350' - 4460'
Elevation: 5872'

Packer Depth 4282 ft
PBTD 4706 ft
Oil Level
H2O Level
Zero:

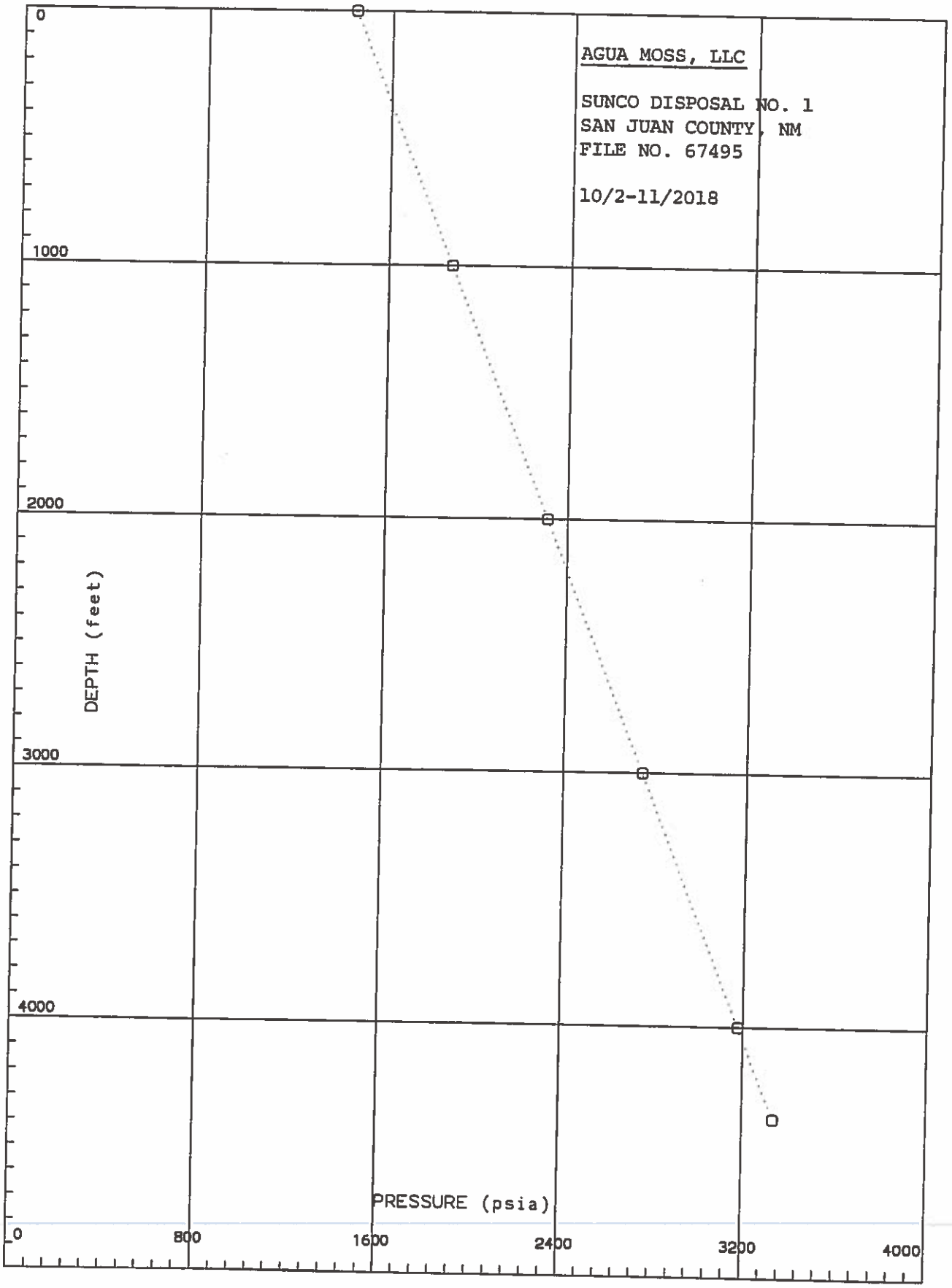
Shut-in BHP 3335 @ 4362 ft
Shut-in WHP 1439

Shut-in BHT 0 F @ 0 ft
Shut-in WHT 0 F

[Tefteller Incorporated]

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	1439.00	
2	1000	1000	1875.00	0.436
3	2000	2000	2310.00	0.435
4	3000	3000	2744.00	0.434
5	4000	4000	3176.00	0.432
6	4362	4362	3335.00	0.439

1.78 @ 4278' KB
1.87 @ 4269' KB
END INJECTION - 140.25 HRS. FALL-OFF


AGUA MOSS, LLC
SUNCO DISPOSAL NO. 1
SAN JUAN COUNTY, NM
FILE NO. 67495
10/2-11/2018
0
1000
2000
3000
4000
DEPTH (feet)
PRESSURE (psia)
0
800
1600
2400
3200
4000

SP-2000

Downhole Memory Pressure Gauge

The SP-2000 downhole memory pressure gauge is controlled by an internal microprocessor and powerful software.

The SP-2000 can stay downhole and collect data for hours or days; depending on your application. It is slimline and operates fully from battery power.

The microprocessor is capable of detecting the correct pressure and temperature and adjust the sampling rate automatically (once programmed for the test application).

The SP-2000 is tough, dependable, simple, and intelligent. If your job requires gauges that are reliable yet rugged and simple to use, the SP-2000 memory gauge, with it's Hybrid-Quartz sensor is the one for you. It is so simple that a paper clip can be used to program it by changing the switch settings for the Type and Duration of test.

With the use of our simple, menu driven software, you can retrieve and report the gauge data (using a compatible computer and printer) from the tool once it is removed from the well.

Advanced reporting features are available such as data printouts, gradient reports, gradient plots and most of the standard time vs. pressure/temperature plot formats.

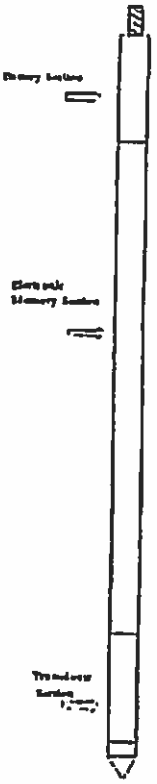
Micro-Smart Systems offers complete Well Test Interpretation, utilizing Fekete's "F.A.S.T. Well Test™" software. This powerful state-of-the-art software includes data preparation, various analysis methods, analytical reservoir modeling and deliverability.

Micro-Smart Systems is the *SMART* choice for cutting-edge technology and superior customer support. We can save you time, money, and help you keep your customers satisfied.

SMART Features:

The technological features of the SP-2000 are:

- Dual EEPROM Memory
- Tool performs internal tests and delivers audible signal to confirm operation
- Multiple-run data storage capability
- User friendly software
- Convert from memory to SRO gauge with simple module change
- Compatible with Micro-Smart's production logging tools
- Standard ASCII data storage format
- Switch selectable programming without the use of a computer
- Selectable switches for duration in *DAYS* and *TYPE of TEST*
- Custom computer programming
  - up to 15 time periods
  - specify time interval, sampling rate, and ΔP switching.



"SMART AND SIMPLE"

SPECIFICATIONS:

Memory Capacity: 43,000 data sets (main memory)
2,000 data sets (backup memory)
(time, pressure, temp.)
Sampling Intervals: 1.875 seconds to 64 minutes
(in binary multiples)
Diameter: 1.25 inch (31.2 mm)
Resolution: Pressure .01 psi
Temp. .04° F
Accuracy: Pressure ±.05% Full Scale
Temp. ± 1°F
Time ±.05%

Pressure Ranges: 2,500 psi (17,000 KPA)
5,000 psi (34,000 KPA)
10,000 psi (68,000 KPA)
15,000 psi (102,000 KPA)
20,000 psi (136,000 KPA)
Weight: 11 lbs (5.0 Kg)
Operating Temp.: 32° F to 325° F
(0° C to 160° C)
Power: 11.2v (9 "c" cell Alkaline)
14.4v (4 "c" cell Lithium)
Length: 53 in. (1.3 m) plus battery pack
24 in. (.6 m) for 9 cell pack
16 in. (.4 m) for 4 cell pack

ACCURACY VERIFICATION

23-February-2018

Gauge Model	SP-2000	Pressure Range	5 K
Gauge S/N	262	Accuracy 0.05%	Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference psi	Difference Percent (%)
0.01	1.27	1.26	0.0252%
774.08	775.05	0.97	0.0194%
1498.24	1498.48	0.24	0.0048%
2222.36	2222.51	0.15	0.0030%
2946.53	2946.99	0.46	0.0092%
3670.66	3671.93	1.27	0.0254%
4394.87	4396.59	1.72	0.0344%
5119.00	5120.35	1.35	0.0270%
4394.87	4397.28	2.41	0.0482%
3670.66	3673.03	2.37	0.0474%
2946.53	2948.40	1.87	0.0374%
2222.36	2223.94	1.58	0.0316%
1498.24	1499.88	1.64	0.0328%
774.08	776.24	2.16	0.0432%
0.01	2.10	2.09	0.0418%

Oven Temperature: **179.7** °F Probe Temperature: **179.4** °F

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00
Serial #26618, Mass Set Serial #25608
Compensated to local acceleration due to gravity

Verified by: CM

OCT 17 2018

ACCURACY VERIFICATION

23-February-2018

Gauge Model	SP-2000	Pressure Range	5 K
Gauge S/N	262	Accuracy 0.05%	Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference psi	Percent (%)
0.01	1.40	1.39	0.0278%
774.08	774.85	0.77	0.0154%
1498.24	1499.96	1.72	0.0344%
2222.36	2222.84	0.48	0.0096%
2946.53	2947.01	0.48	0.0096%
3670.66	3671.21	0.55	0.0110%
4394.87	4395.43	0.56	0.0112%
5119.00	5119.62	0.62	0.0124%
4394.87	4395.86	0.99	0.0198%
3670.66	3671.85	1.19	0.0238%
2946.53	2947.82	1.29	0.0258%
2222.36	2223.50	1.14	0.0228%
1498.24	1499.51	1.27	0.0254%
774.08	775.37	1.29	0.0258%
0.01	1.52	1.51	0.0302%

Oven Temperature: **253.9 °F** Probe Temperature: **253.7 °F**

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00
Serial #26618, Mass Set Serial #25608
Compensated to local acceleration due to gravity

Verified by: CM

ACCURACY VERIFICATION

23-February-2018

Gauge Model	SP-2000	Pressure Range	5 K
Gauge S/N	262	Accuracy 0.05%	Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference psi	Percent (%)
0.01	1.40	1.39	0.0278%
774.08	774.85	0.77	0.0154%
1498.24	1499.96	1.72	0.0344%
2222.36	2222.84	0.48	0.0095%
2946.53	2947.01	0.48	0.0096%
3670.66	3671.21	0.55	0.0110%
4394.87	4395.43	0.56	0.0112%
5119.00	5119.62	0.62	0.0124%
4394.87	4395.86	0.99	0.0198%
3670.66	3671.85	1.19	0.0238%
2946.53	2947.82	1.29	0.0258%
2222.36	2223.52	1.16	0.0232%
1498.24	1499.51	1.27	0.0254%
774.08	775.37	1.29	0.0258%
0.01	1.52	1.51	0.0302%

Oven Temperature: **274.3** °F Probe Temperature: **274.4** °F

Smart Gauge Calibration accuracy is confirmed.

Calibrated with RUSKA Pressure Standard, model # 2451-700-00
Serial #26618, Mass Set Serial #25608
Compensated to local acceleration due to gravity

Verified by: CM

ACCURACY VERIFICATION

23-February-2018

Gauge Model	SP-2000	Pressure Range	5 K
Gauge S/N	262	Accuracy 0.05%	Full Scale

Applied Pressure psig	Recorded Pressure psig	Difference psi	Difference Percent (%)
0.01	1.27	1.26	0.0252%
774.08	775.05	0.97	0.0194%
1498.24	1498.48	0.24	0.0048%
2222.36	2222.51	0.15	0.0030%
2946.53	2946.99	0.46	0.0092%
3670.66	3671.93	1.27	0.0254%
4394.87	4396.59	1.72	0.0344%
5119.00	5120.35	1.35	0.0270%
4394.87	4397.28	2.41	0.0482%
3670.66	3673.03	2.37	0.0474%
2946.53	2948.40	1.87	0.0374%
2222.36	2223.94	1.58	0.0316%
1498.24	1499.88	1.64	0.0328%
774.08	776.24	2.16	0.0432%
0.01	2.11	2.10	0.0420%

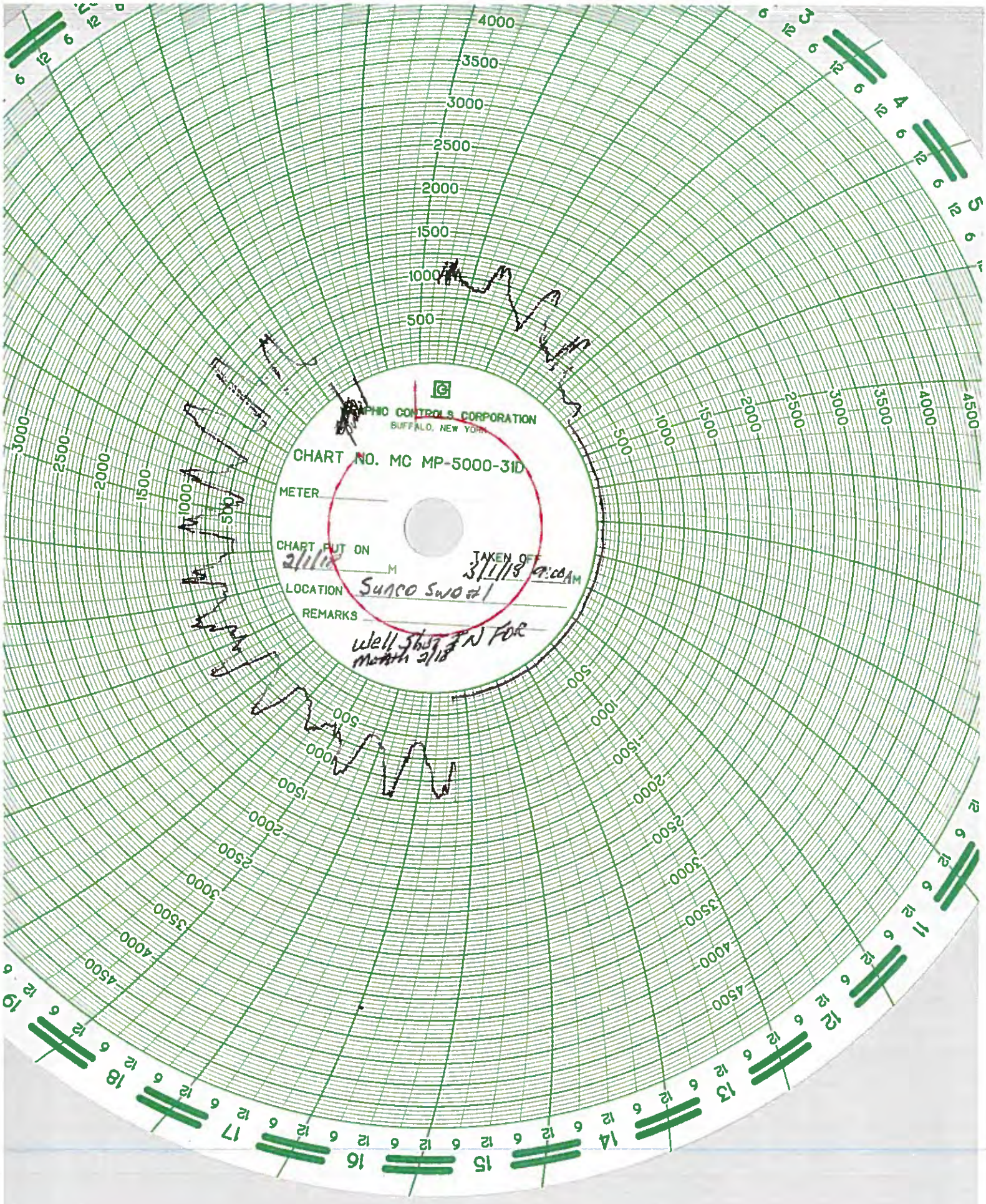
Oven Temperature: **168.2** °F Probe Temperature: **168.1** °F

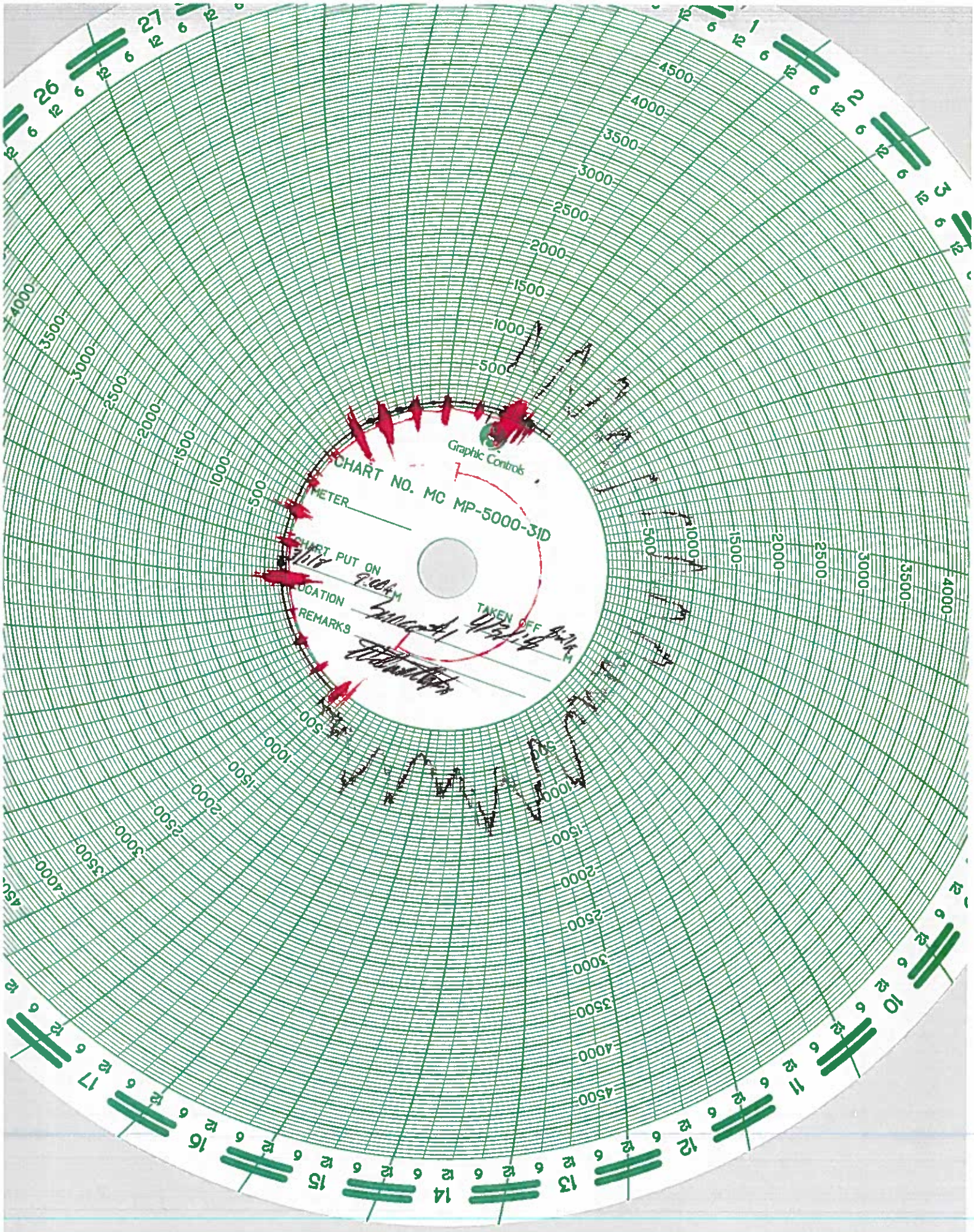
Smart Gauge Calibration accuracy is confirmed.

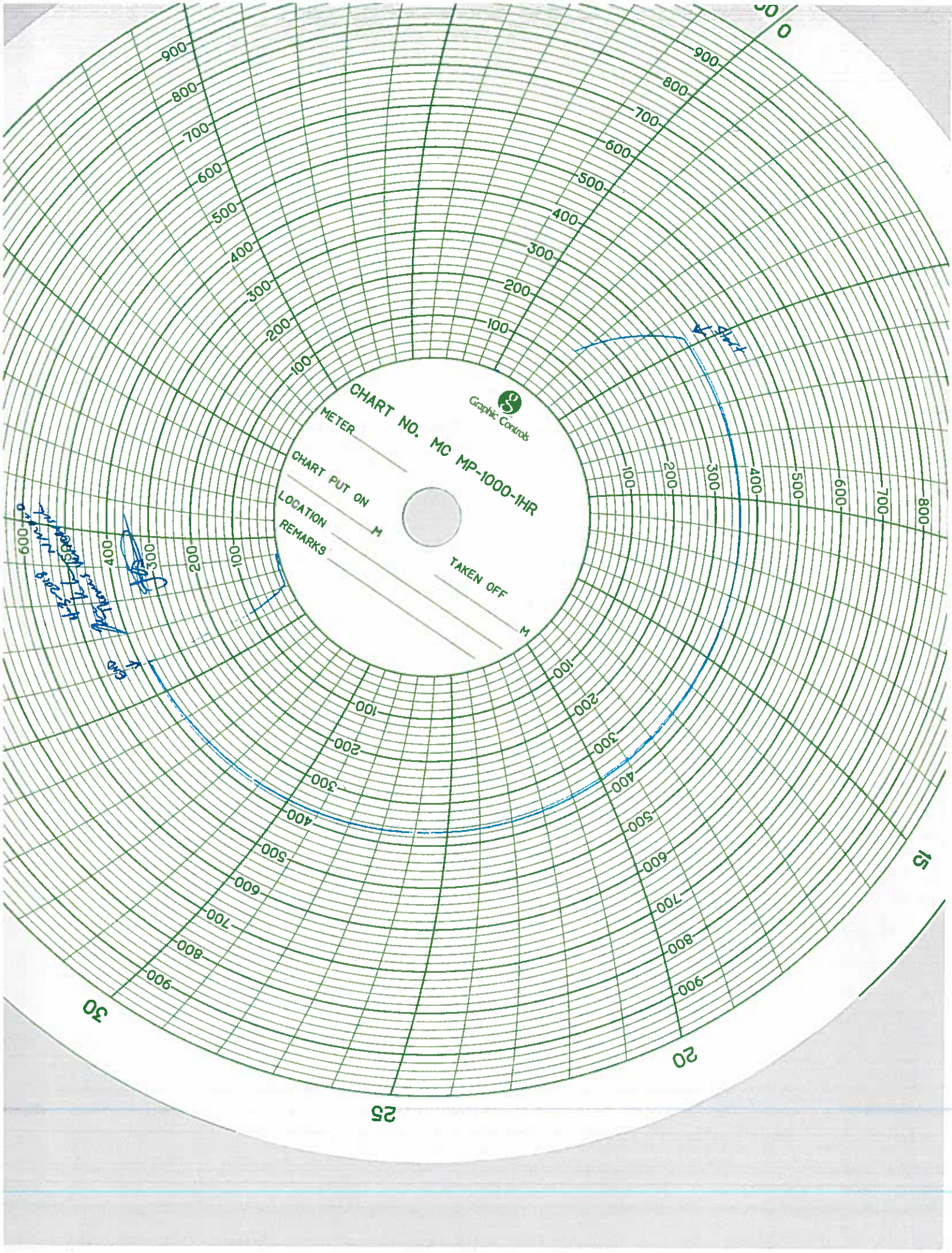
Calibrated with RUSKA Pressure Standard, model # 2451-700-00
Serial #26618, Mass Set Serial #25608
Compensated to local acceleration due to gravity

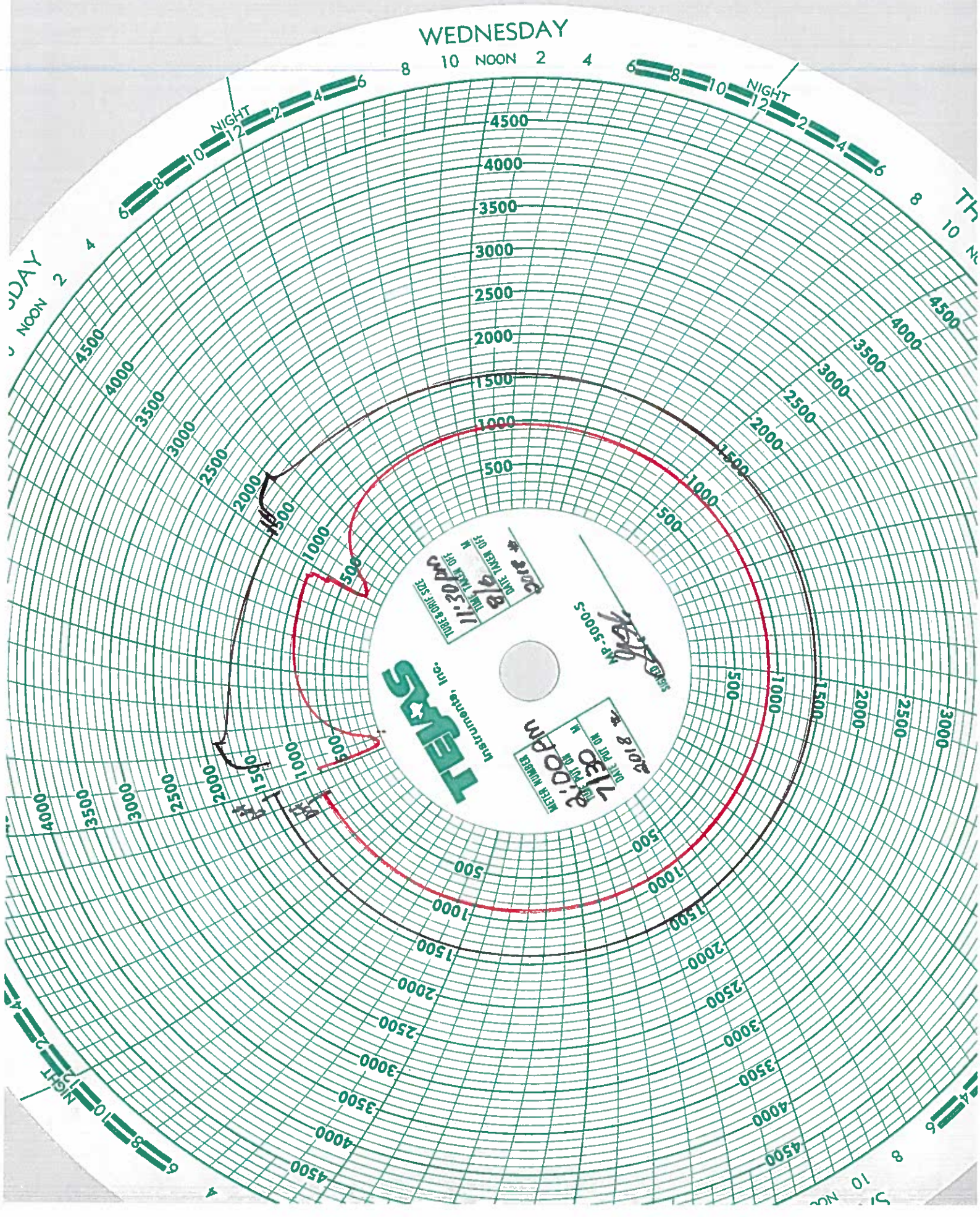
Verified by: CM

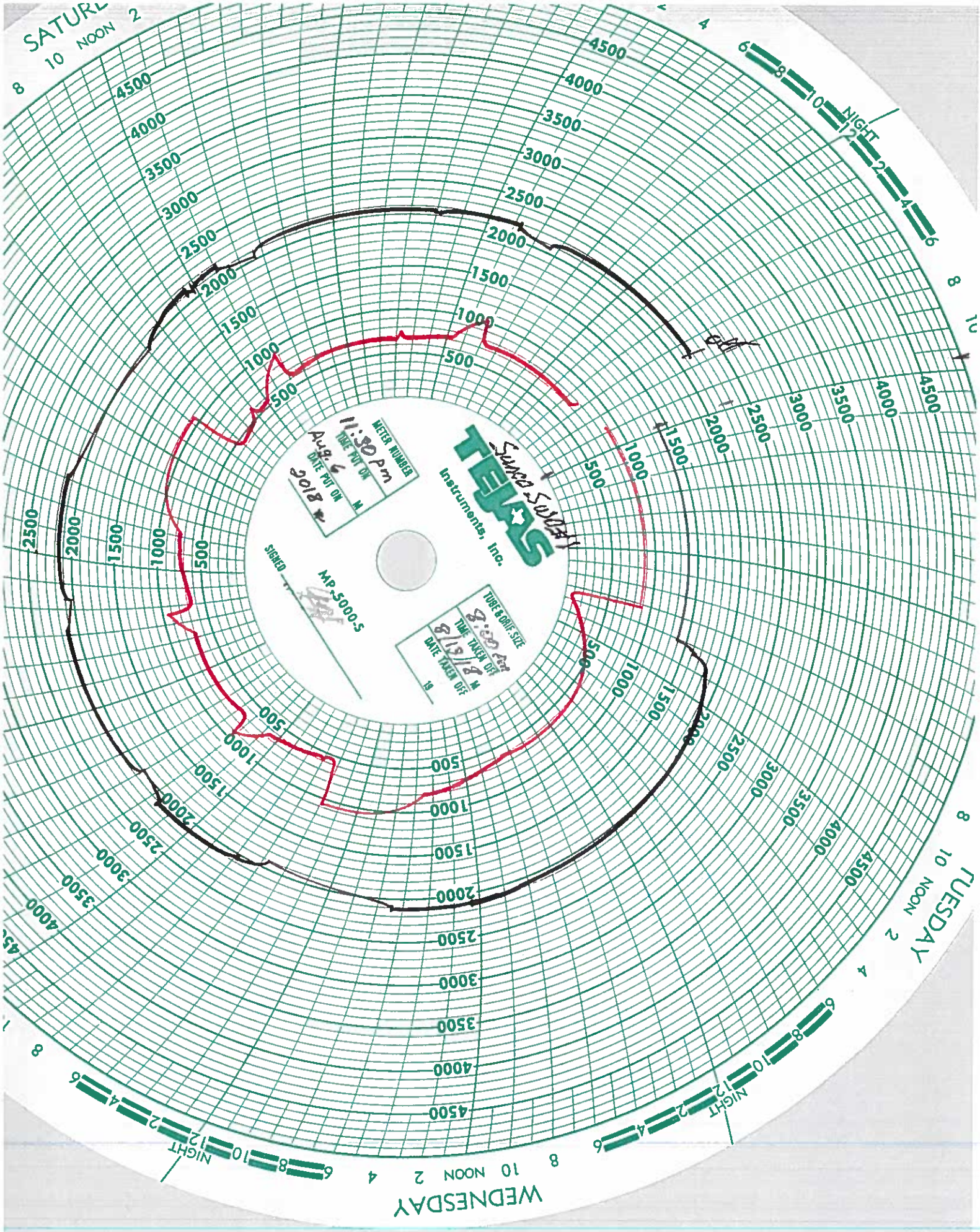
Appendix D

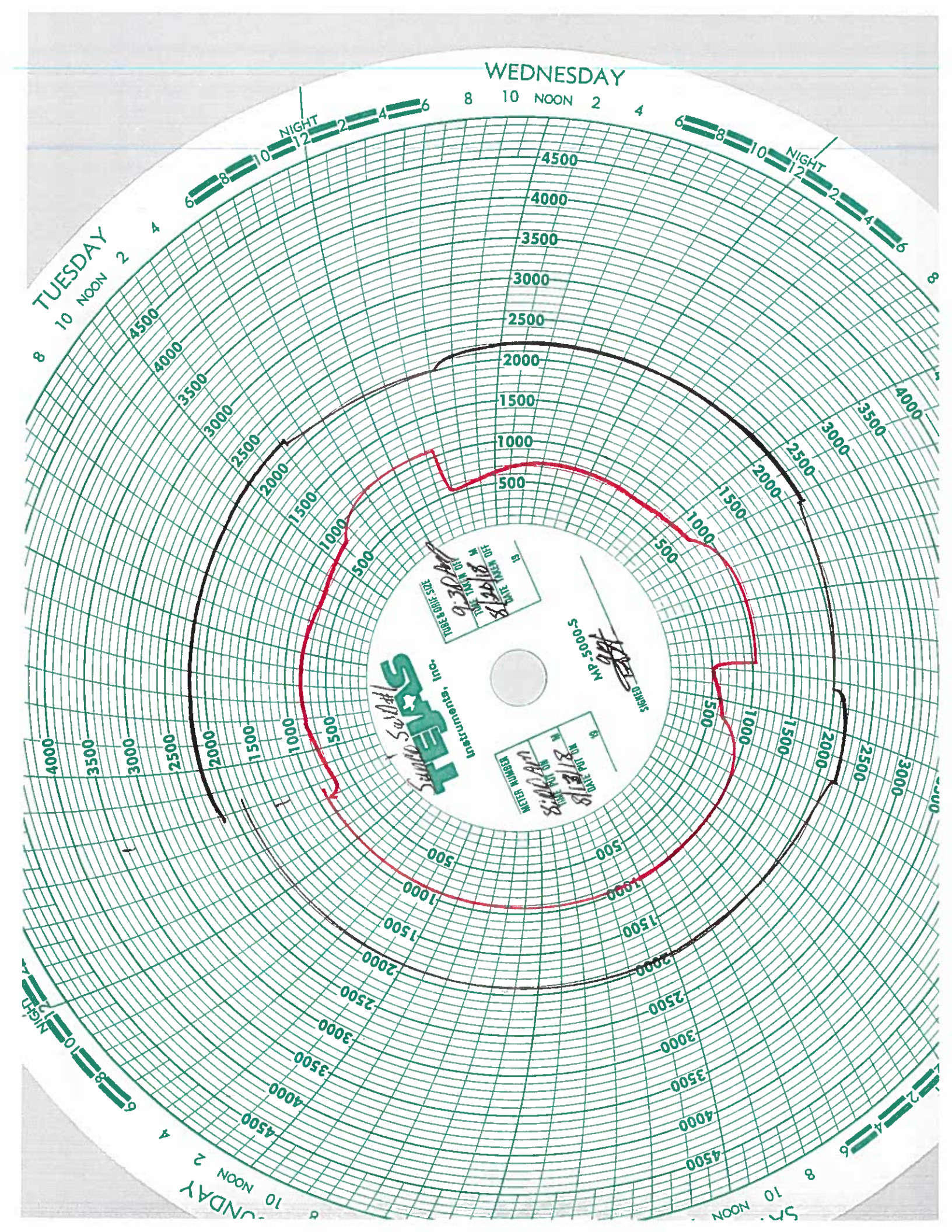

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-5000-31D
METER
CHART PUT ON
M
TAKEN OFF
3/1/18 9:00AM
LOCATION
Sunco SWD #1
REMARKS
Well Shut IN For
Month 2/18

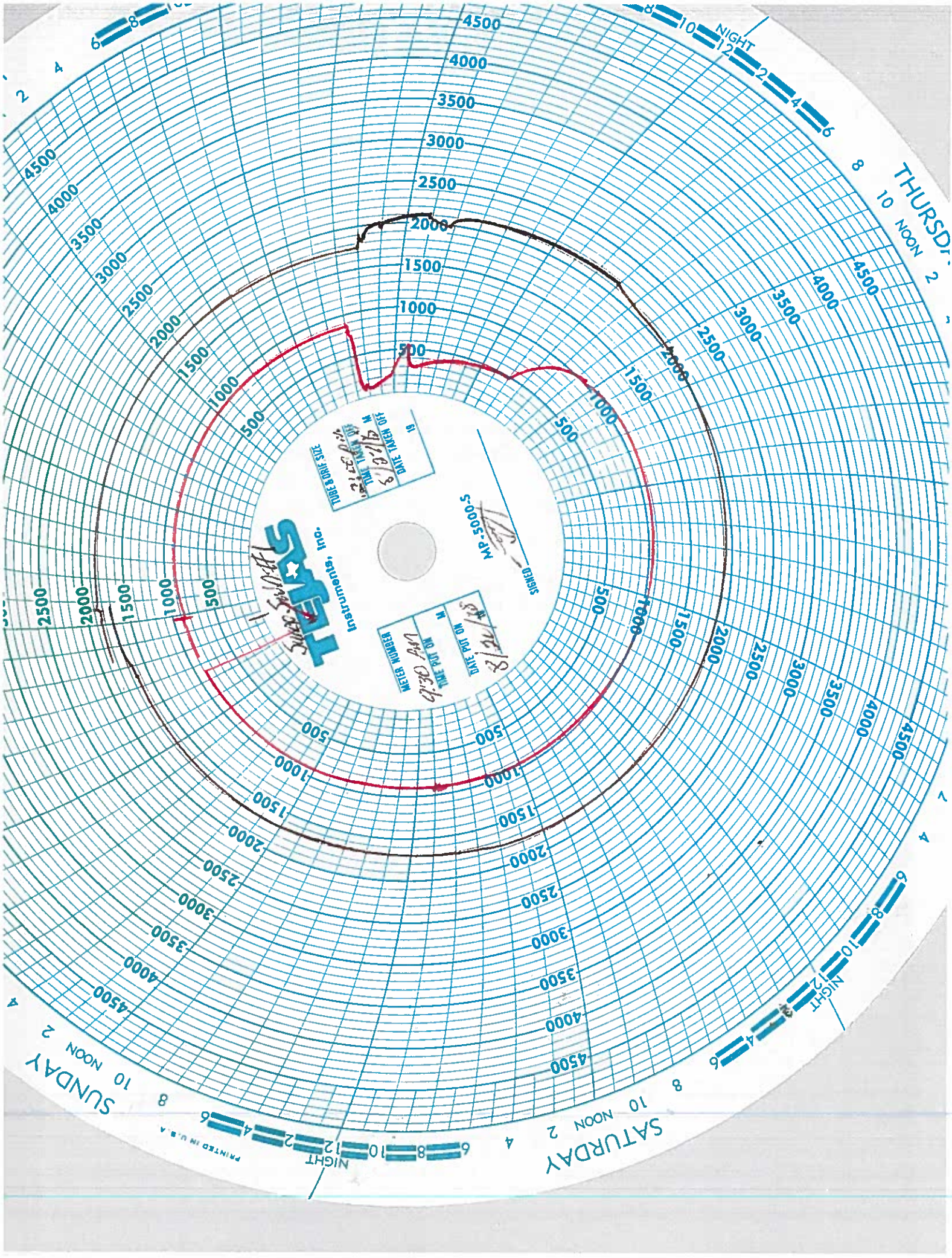

Graphic Controls
CHART NO. MC MP-5000-31D
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF

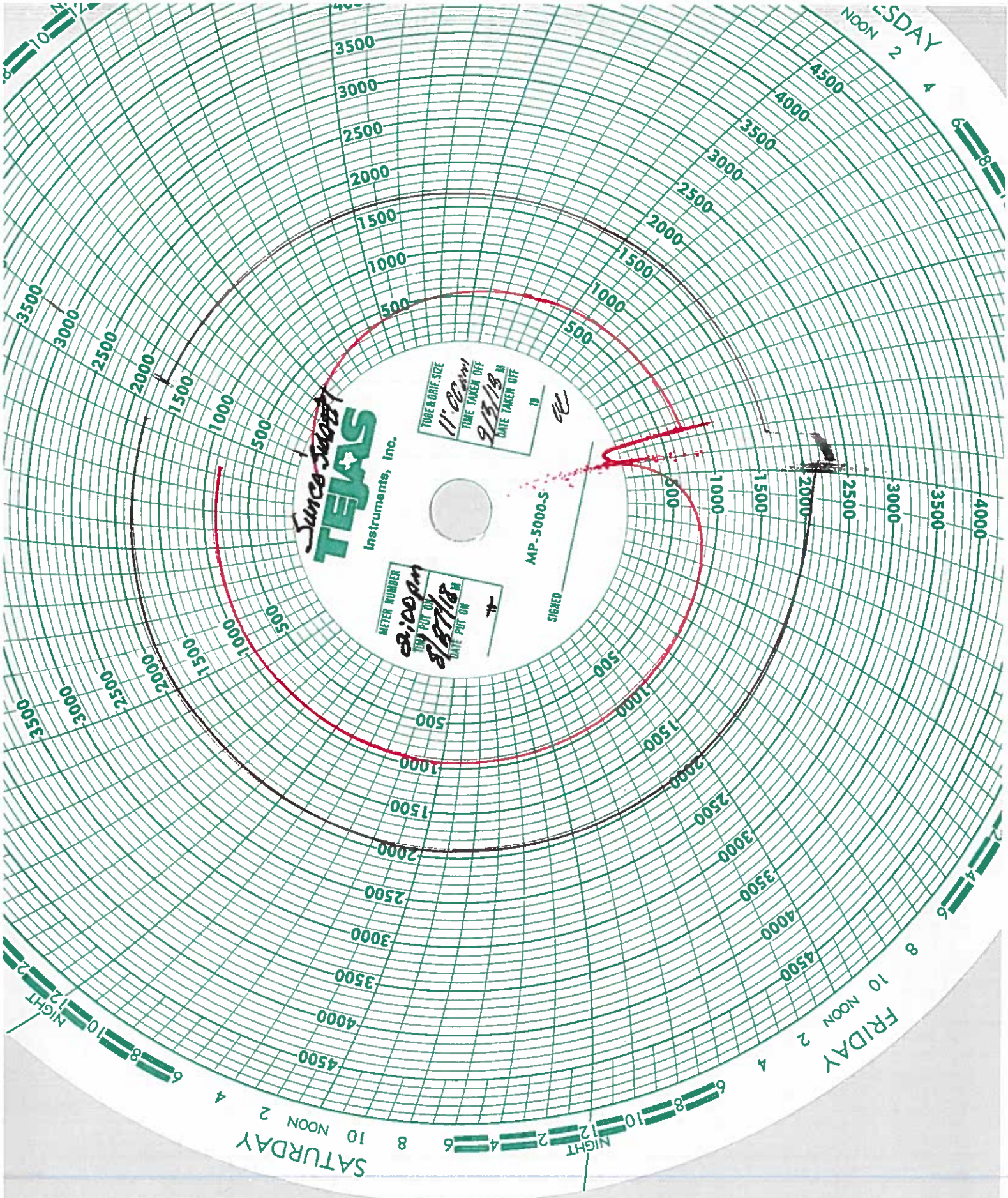

CHART NO. MC MP-1000-1HR
Graphic Controls
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF
M
M
0
5
10
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30
100
200
300
400
500
600
700
800
900

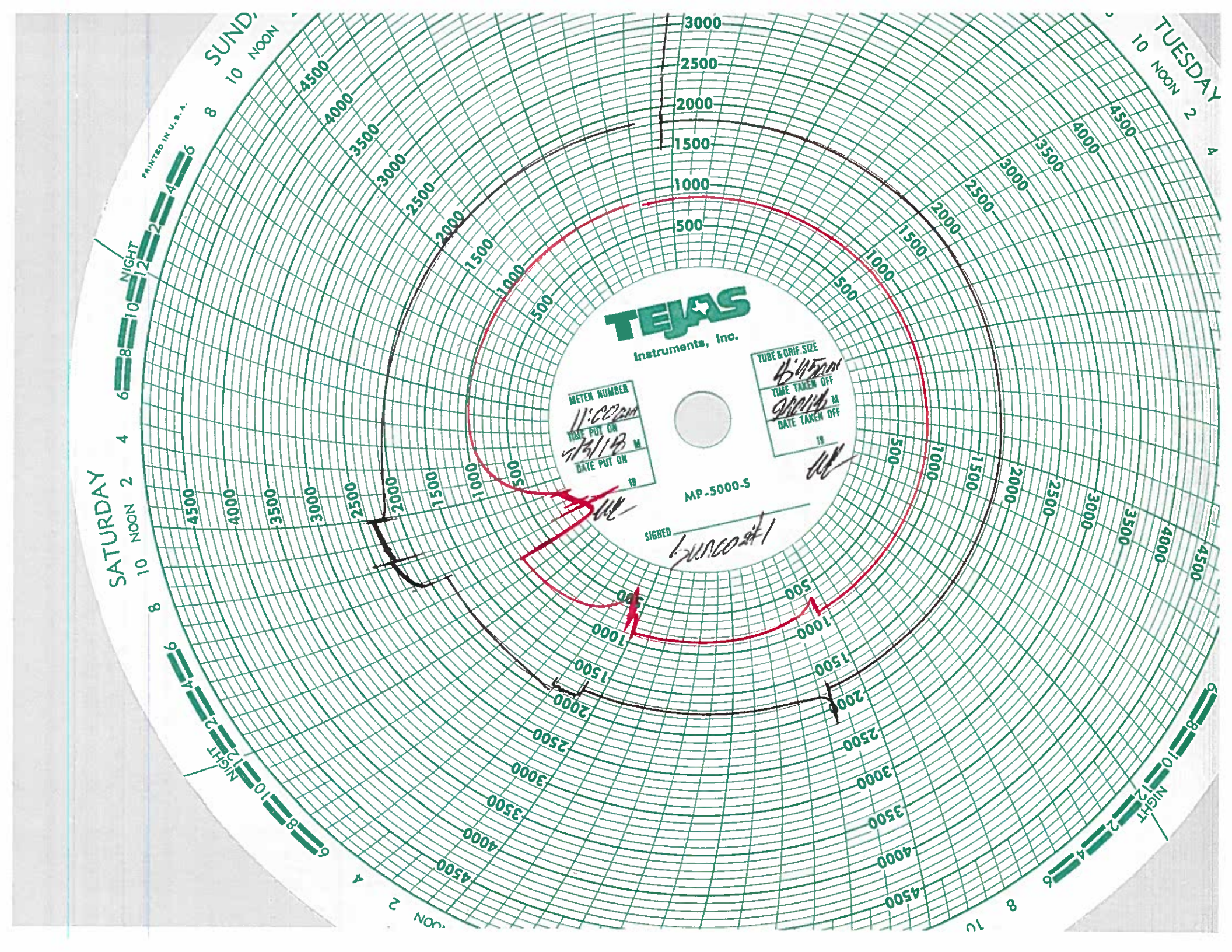

WEDNESDAY
8 10 NOON 2 4 6 8 10 NIGHT 12 2 4 6
4500
4000
3500
3000
2500
2000
1500
1000
500
TEXAS
Instruments, Inc.
MP-5000-S
TIME TAKEN OFF
DATE TAKEN OFF
DATE PUT ON
METER NUMBER

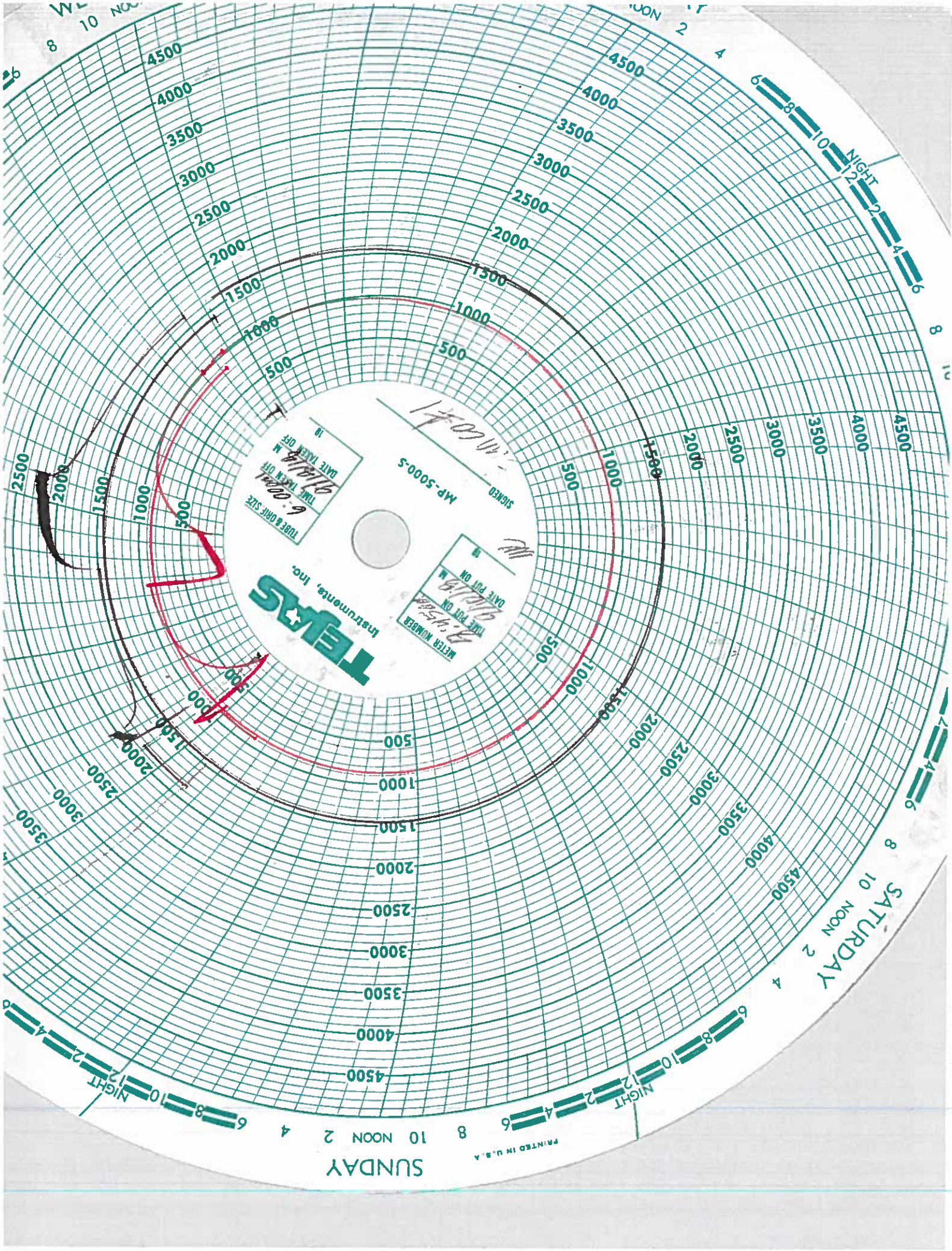

SATURDAY
NOON
TUESDAY
WEDNESDAY
NIGHT
4500
4000
3500
3000
2500
2000
1500
1000
500
METER NUMBER
TIME PUT ON
11:30 pm
DATE PUT ON
Aug 6
2018
M
Sunco Supply
TEXAS
Instruments, Inc.
SIGNED
MP-5000-S
TUBE & ORIFICE SIZE
TIME TAKEN OFF
8:00 pm
DATE TAKEN OFF
8/13/18
M
19

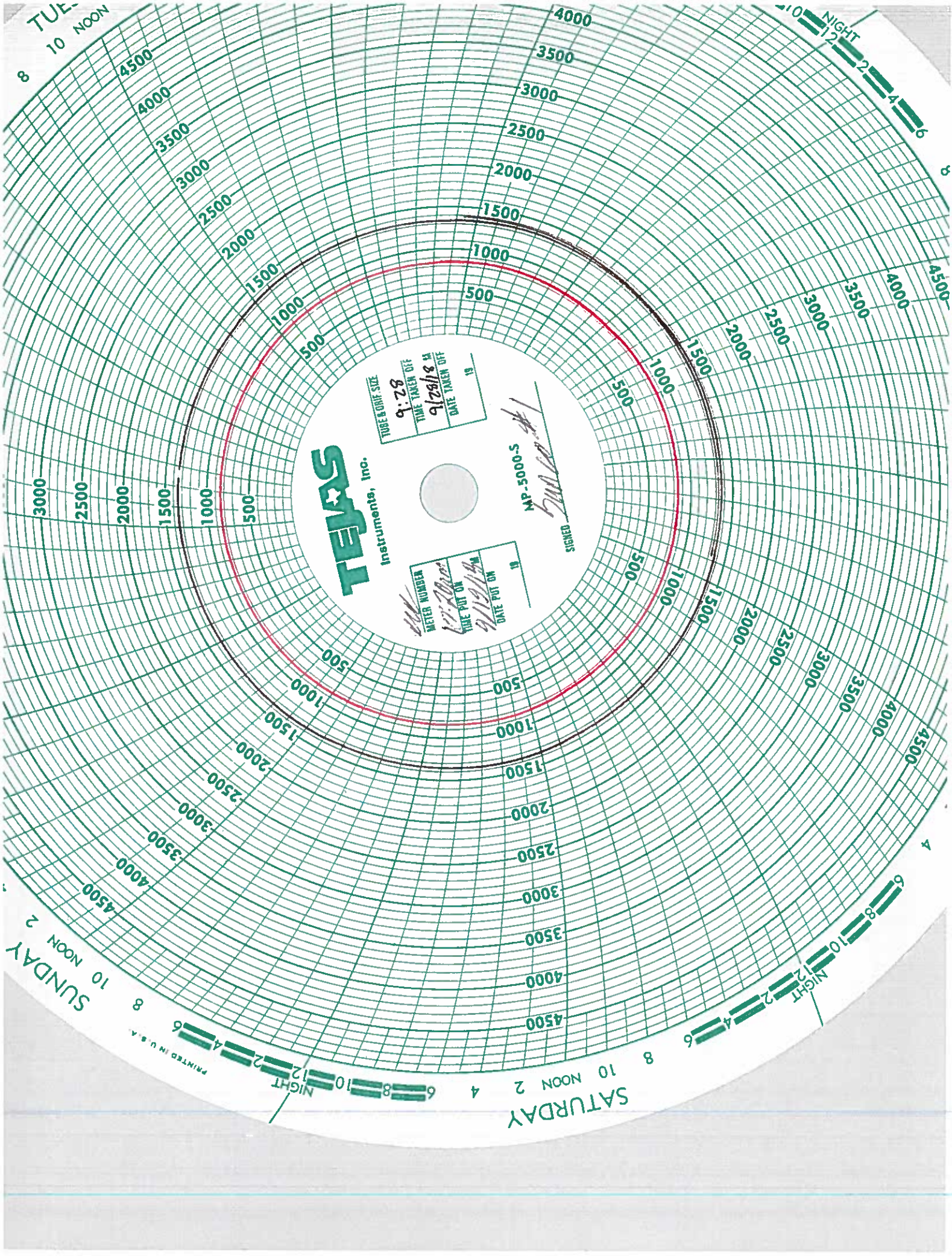

WEDNESDAY
TUESDAY
NIGHT
NOON
4500
4000
3500
3000
2500
2000
1500
1000
500
Instruments, Inc.
Sensitive Switches
TUBE BORE SIZE
DATE TAKEN OFF
DATE PUT ON
METER NUMBER
SPRING
M.P. 3000-5000

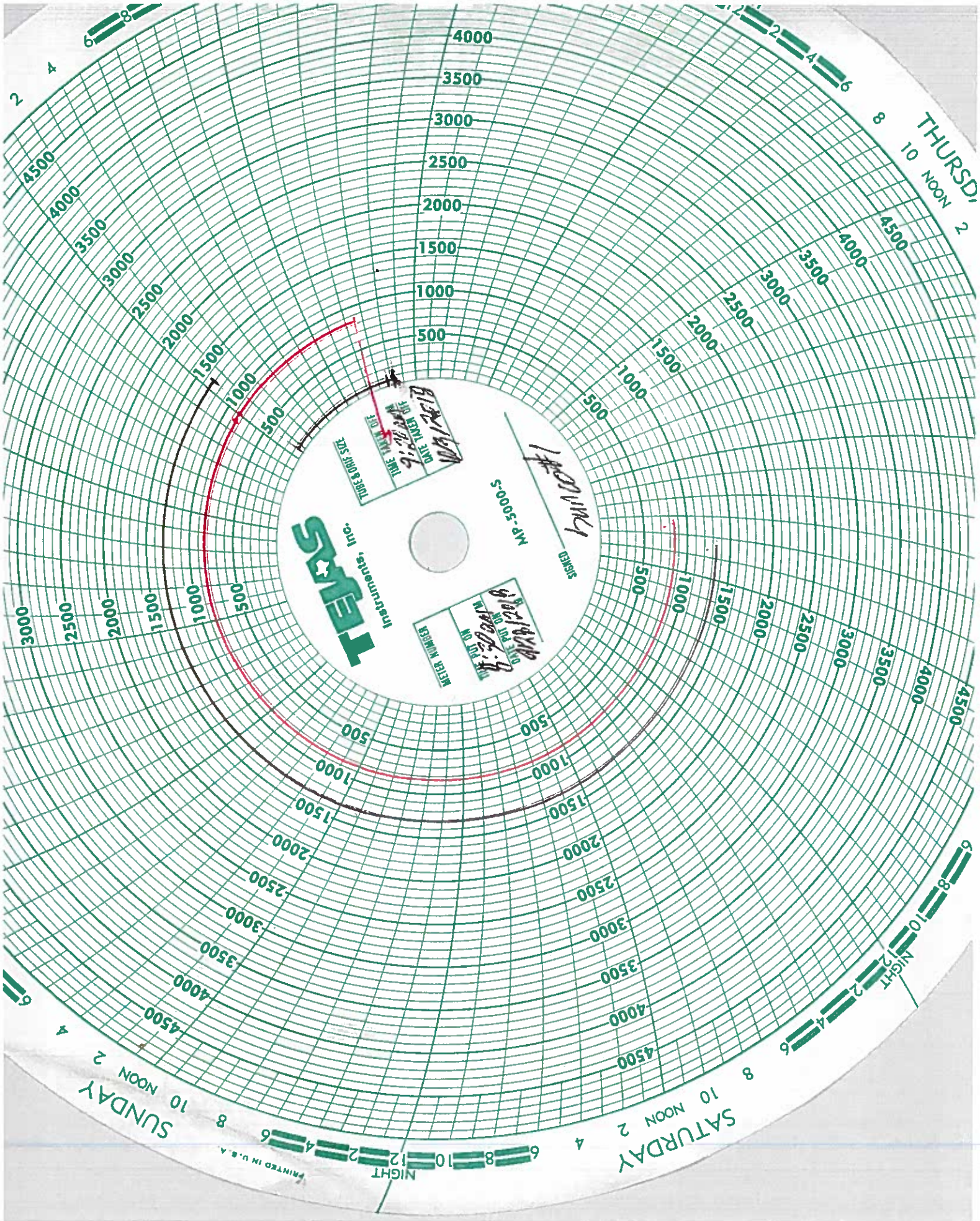

4500
4000
3500
3000
2500
2000
1500
1000
500
NIGHT
NOON
THURSDAY
SATURDAY
SUNDAY
MONDAY
TUBE AND RANGE SIZE
DATE TAKEN OFF
TIME TAKEN OFF
DATE PUT ON
TIME PUT ON
METER NUMBER
MP-5000-S
Instruments, Inc.
PRINTED IN U.S.A.

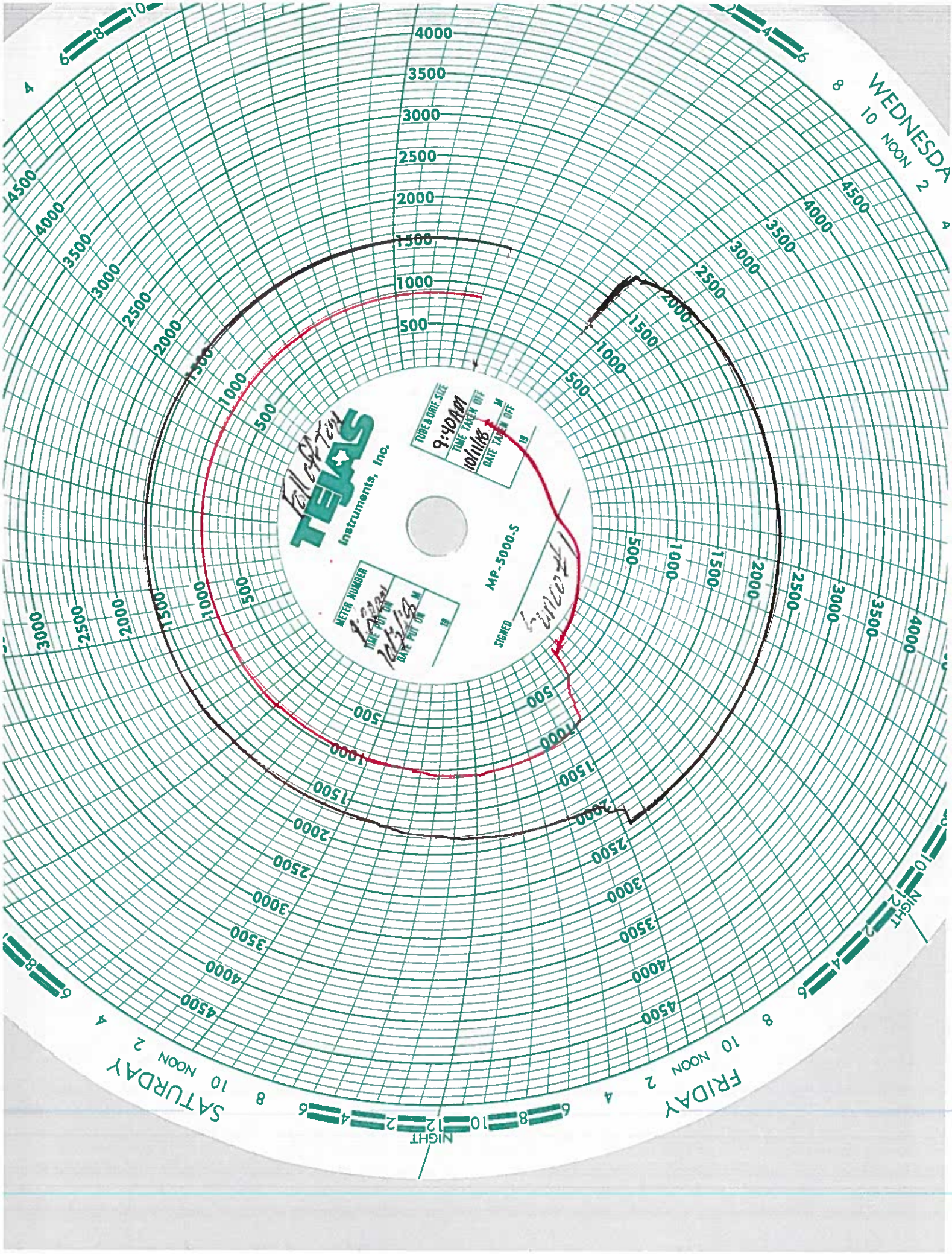

TEJAS
Instruments, Inc.
MP-5000-S
TUBE & ORIF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
METER NUMBER
TIME PUT ON
DATE PUT ON
SIGNED
NOON
NIGHT
FRIDAY
SATURDAY

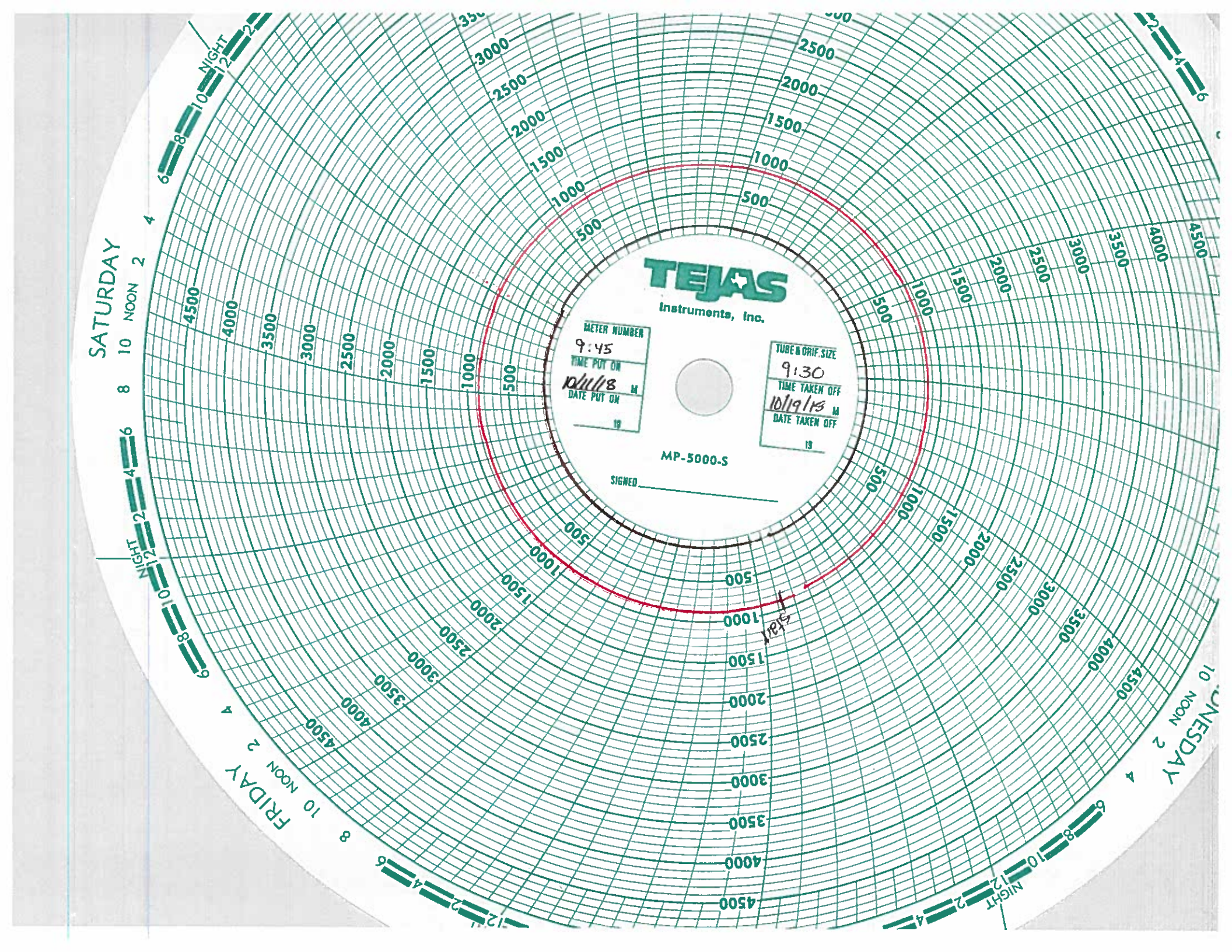

TEJAS
Instruments, Inc.
METER NUMBER
TIME PUT ON
DATE PUT ON
TUBE & ORIF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
MP-5000-S
SIGNED
SUNDAY
MONDAY
TUESDAY
SATURDAY
NOON
NIGHT
PRINTED IN U.S.A.

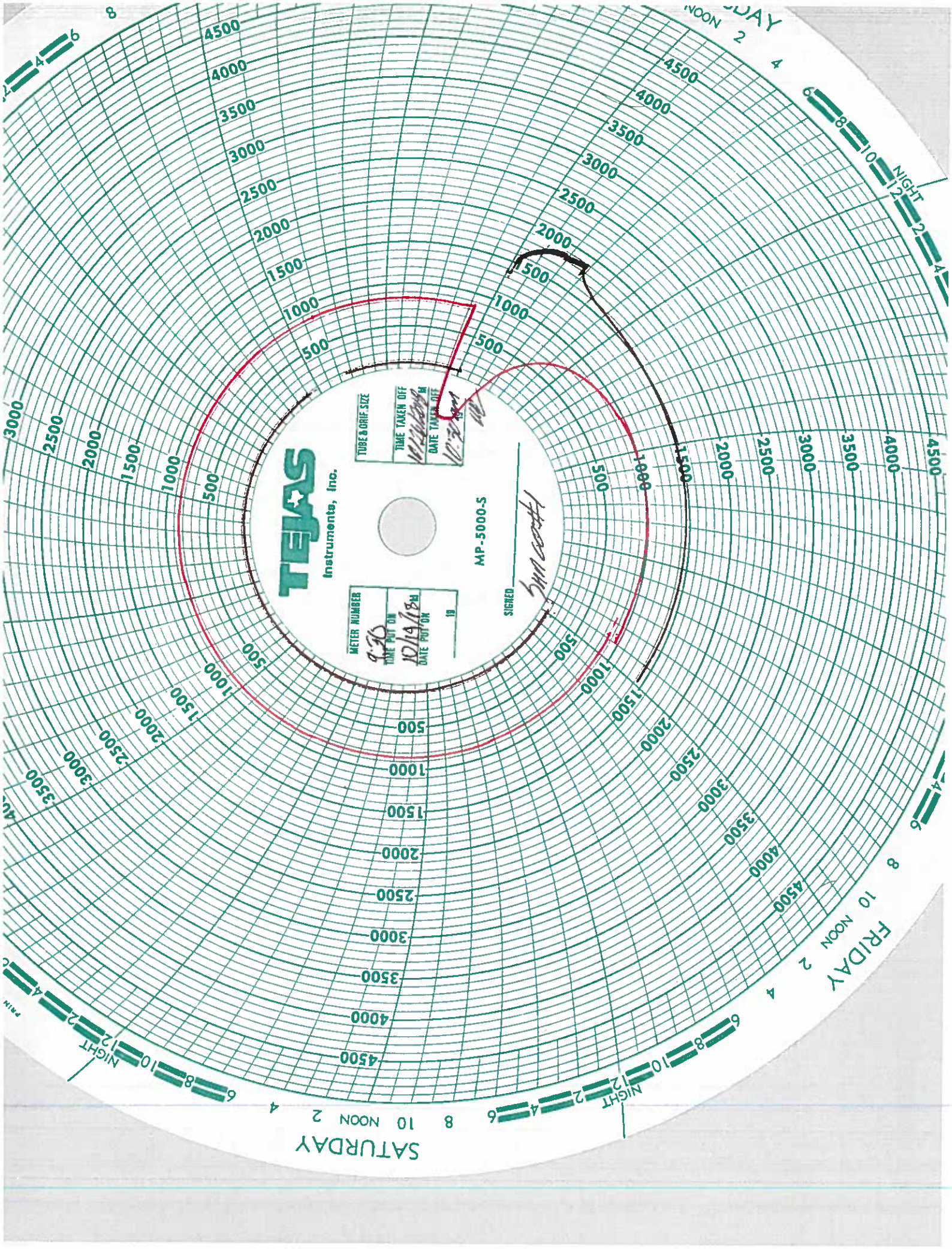

TEXAS
Instruments, Inc.
MP-5000-S
SIGNED
METER NUMBER
TUBE & ORIFICE SIZE
TIME TAKEN OFF
DATE TAKEN OFF
TIME PUT ON
DATE PUT ON
SUNDAY
SATURDAY
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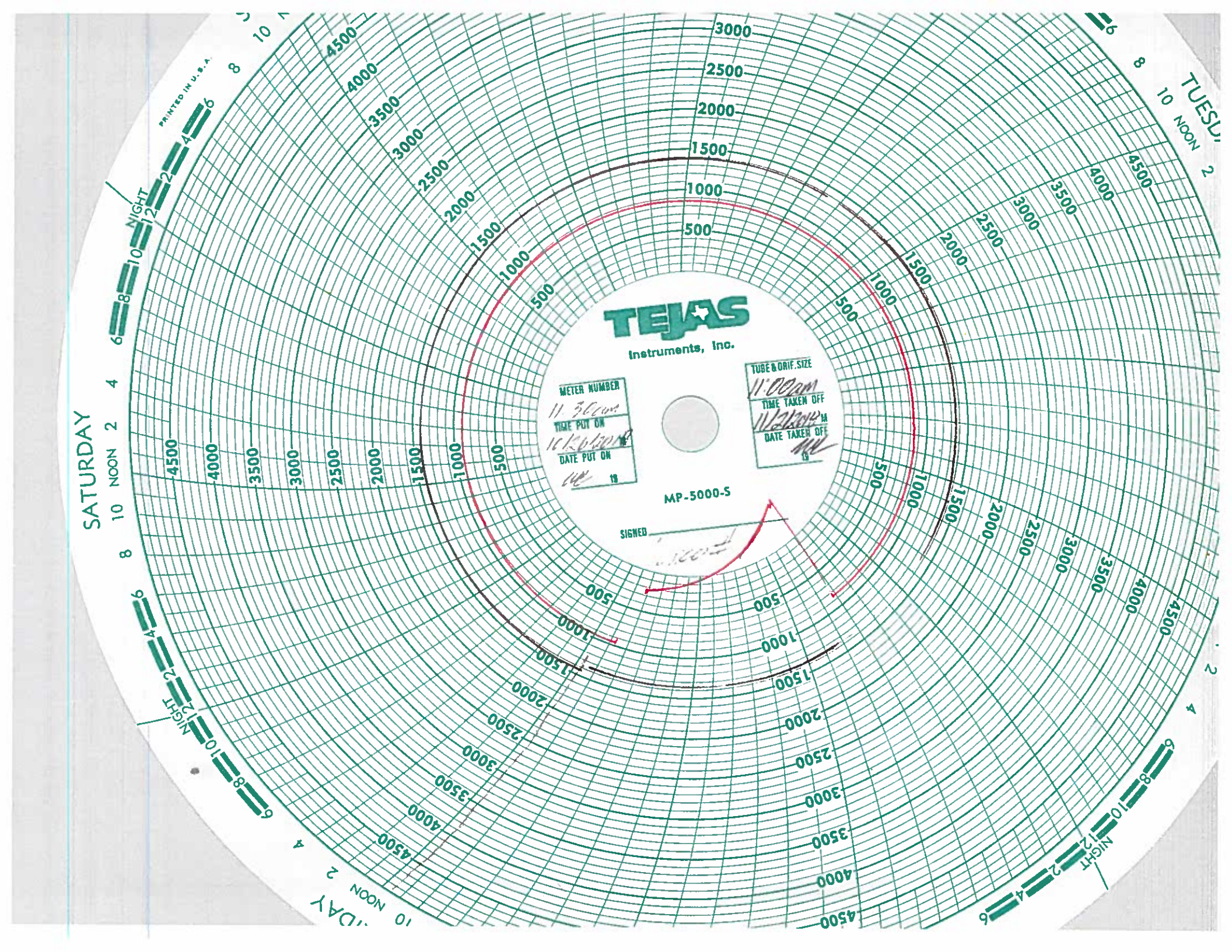

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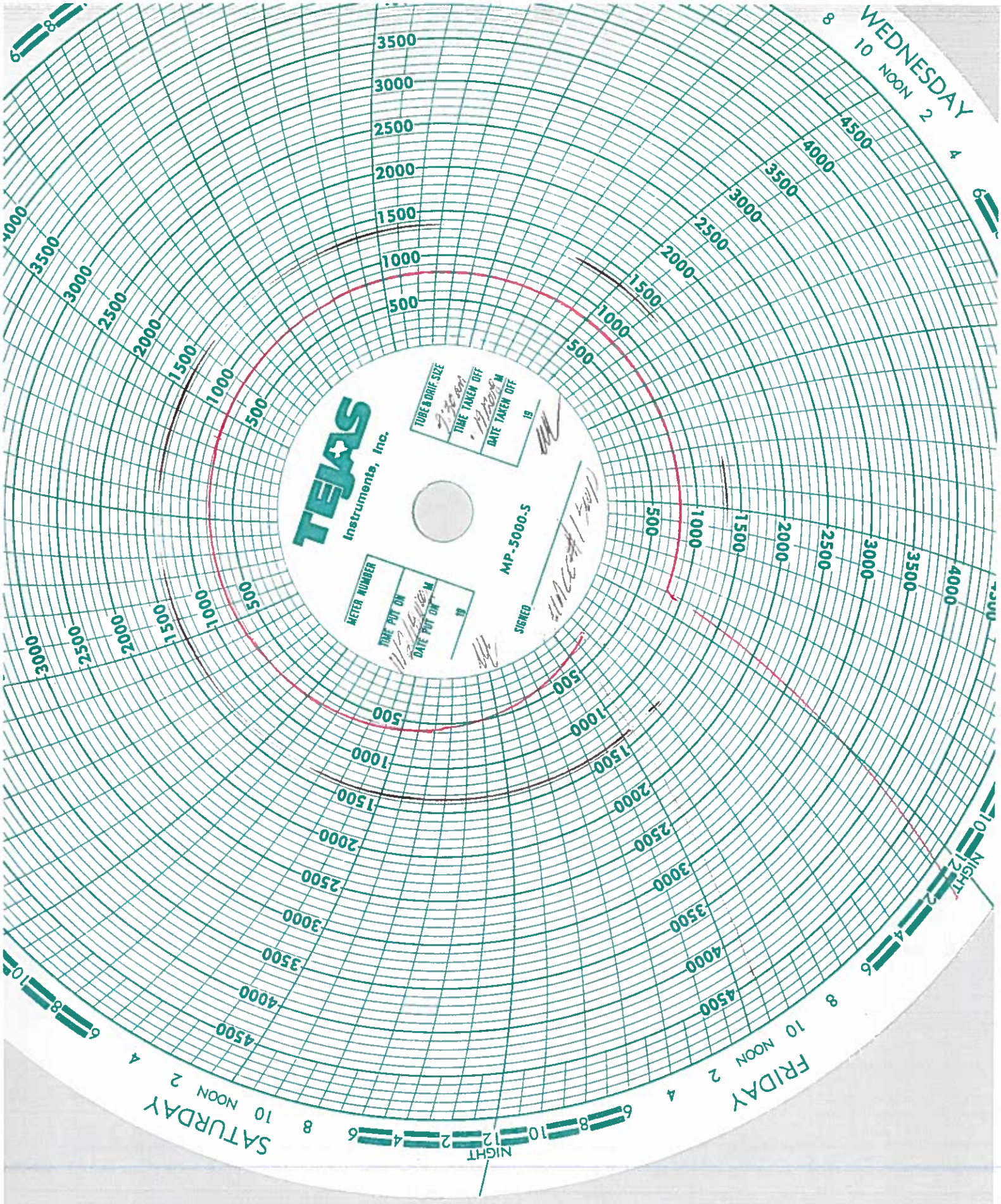

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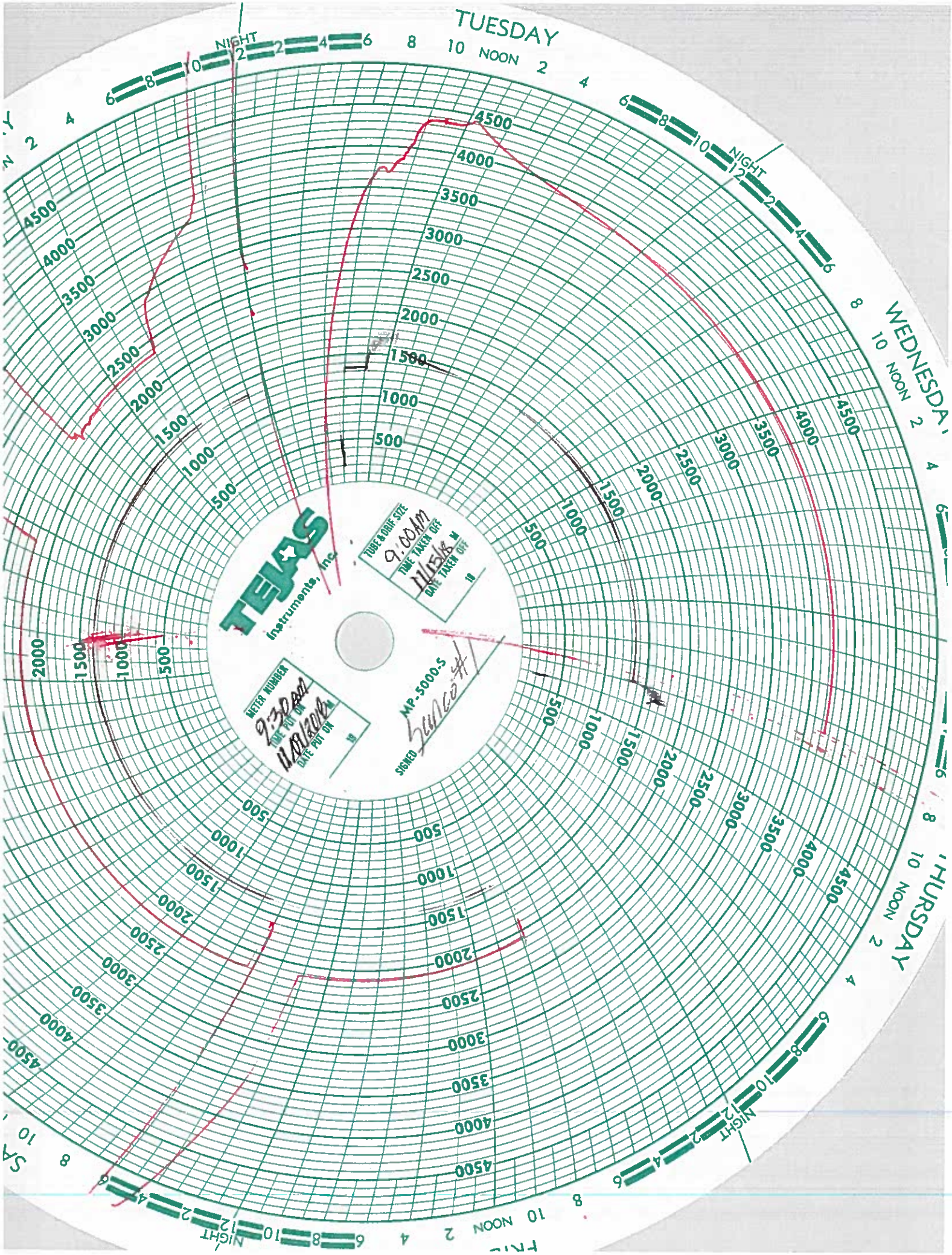

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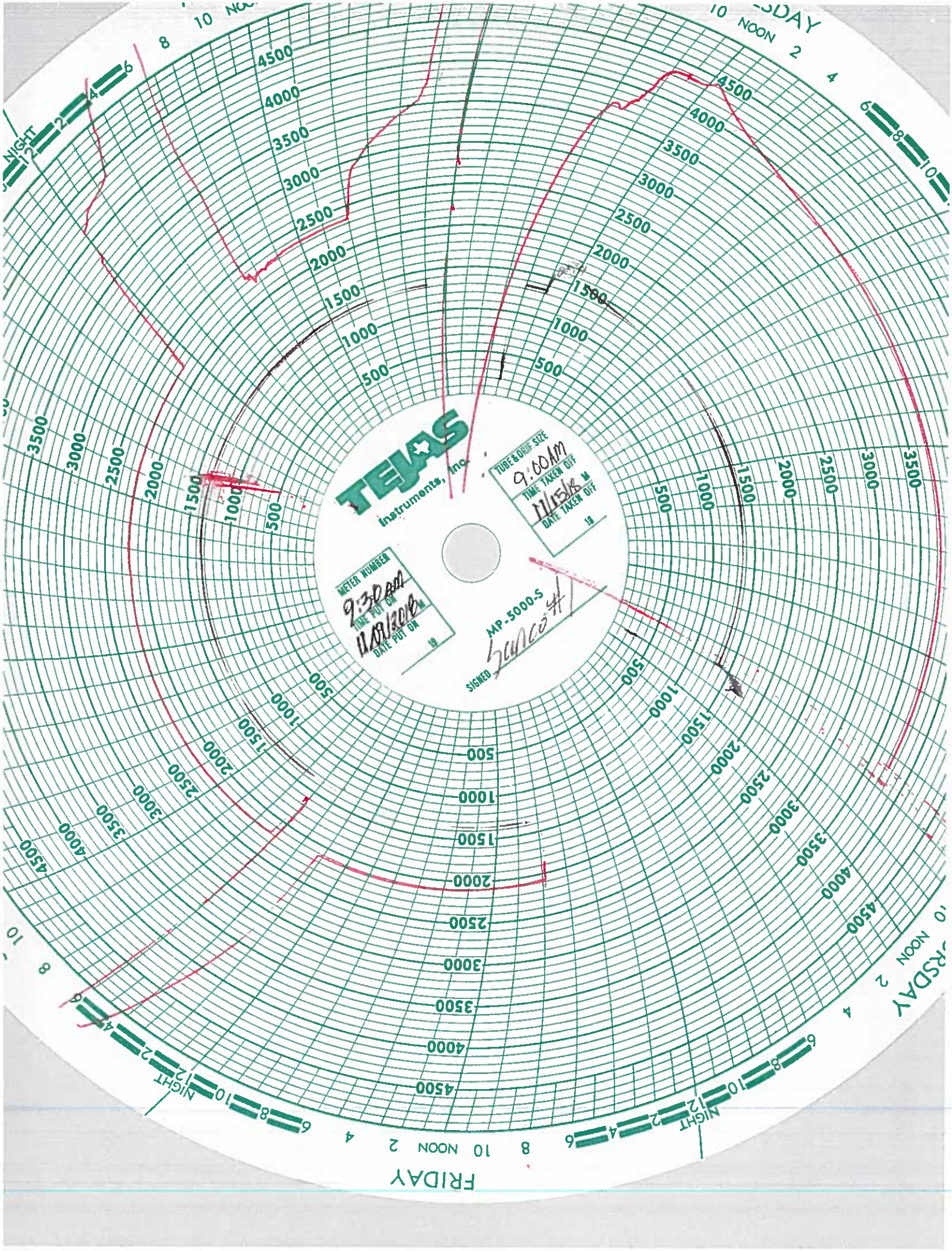

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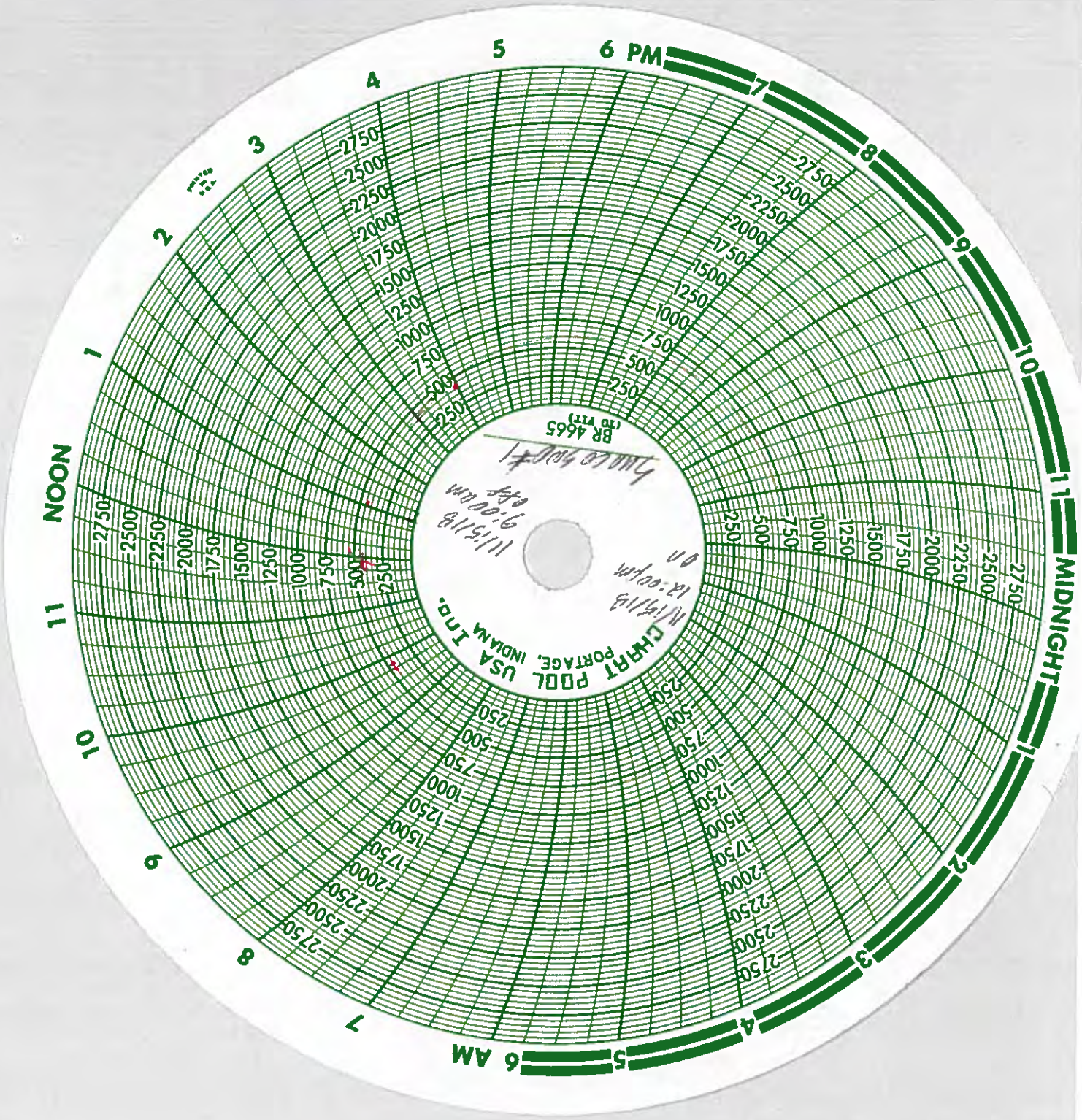

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MP-5000-S
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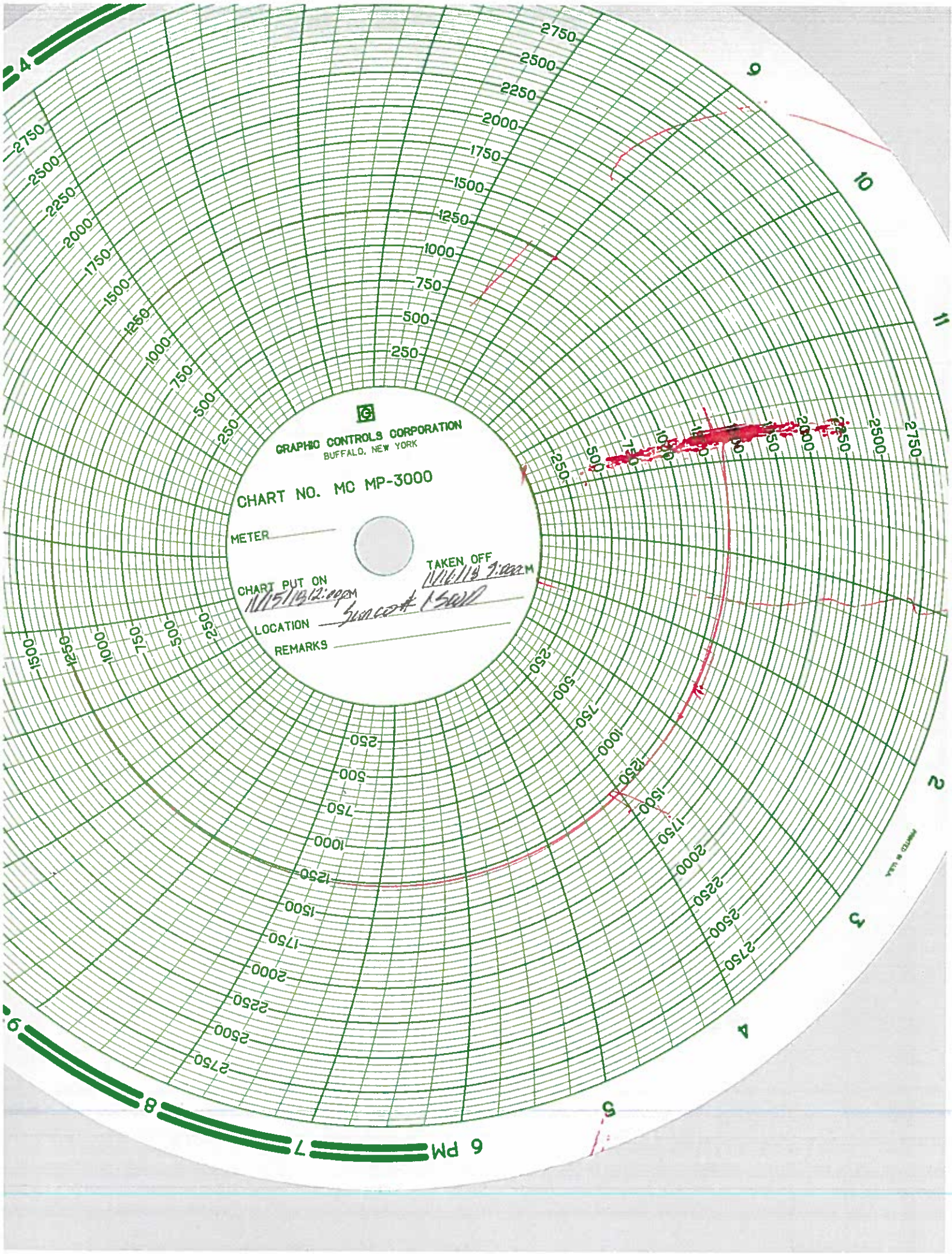
SUNCO SWD #1

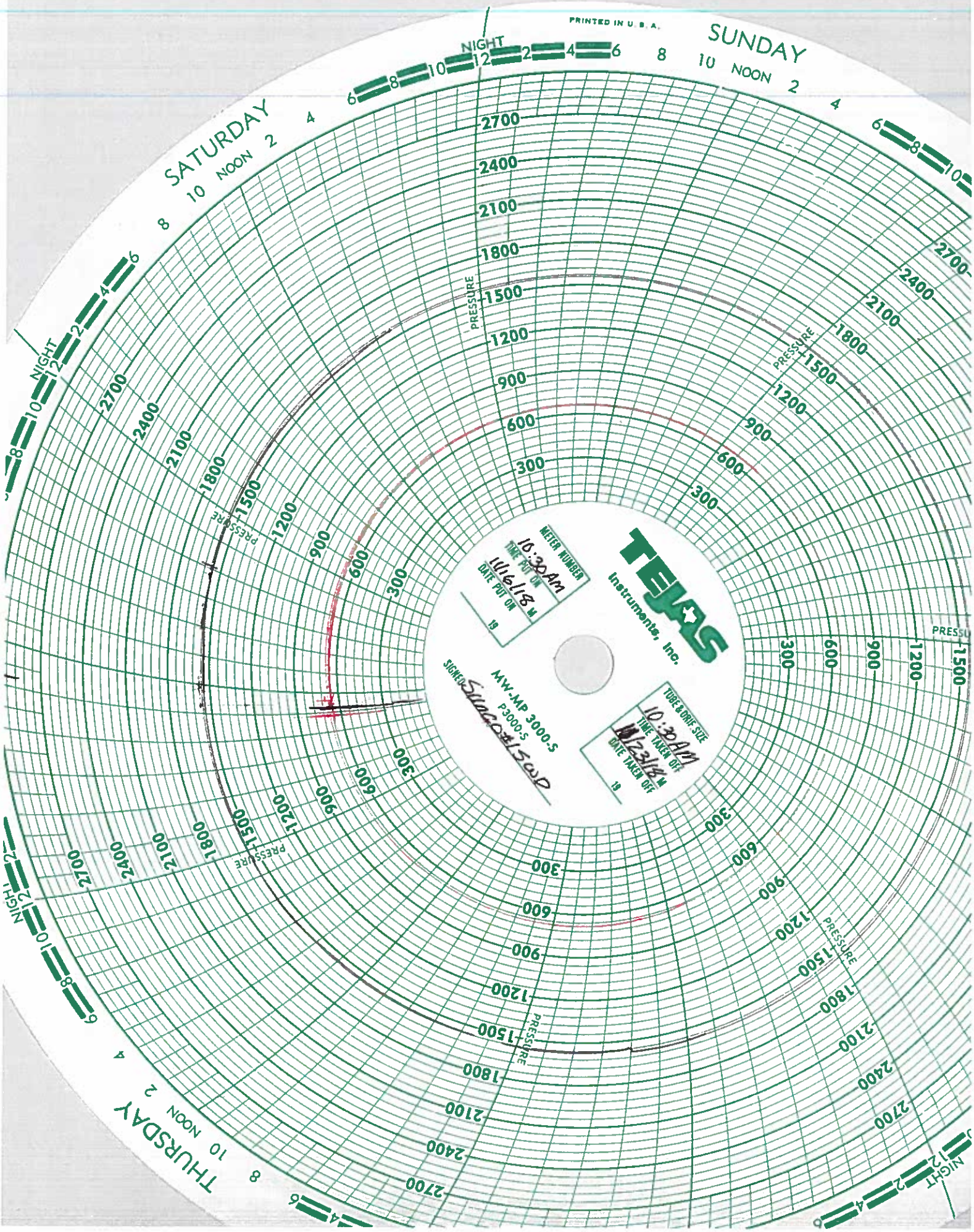
Starting on the morning of November 10,2018, we did not have the well head cover over the well head. Due to not having the well head cover on our well head annulus froze. We put heat trace around the well head, well head recorder and the annulus hose in order to try to keep everything from freezing up. We could not get a company out to put the well head cover on, until the morning of November 14, 2018. Since temperatures were down below freezing every night till we could get the cover on, it caused the well head pens to spike extremely high and eventually the pen arms busted off. We had to rent two new well head recorders in order to properly keep track of our well head annulus and well head pressure. We had the recorder calibrated and fixed by Kiva measurement. Everything is back to normal and we have a heater in the well head cover.


TUESDAY
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METER NUMBER
9:30AM
TIME PUT ON
11/08/06
DATE PUT ON
MP-5000-S
SIGNED


TEXAS
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TIME PUT ON
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DATE PUT ON
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NIGHT

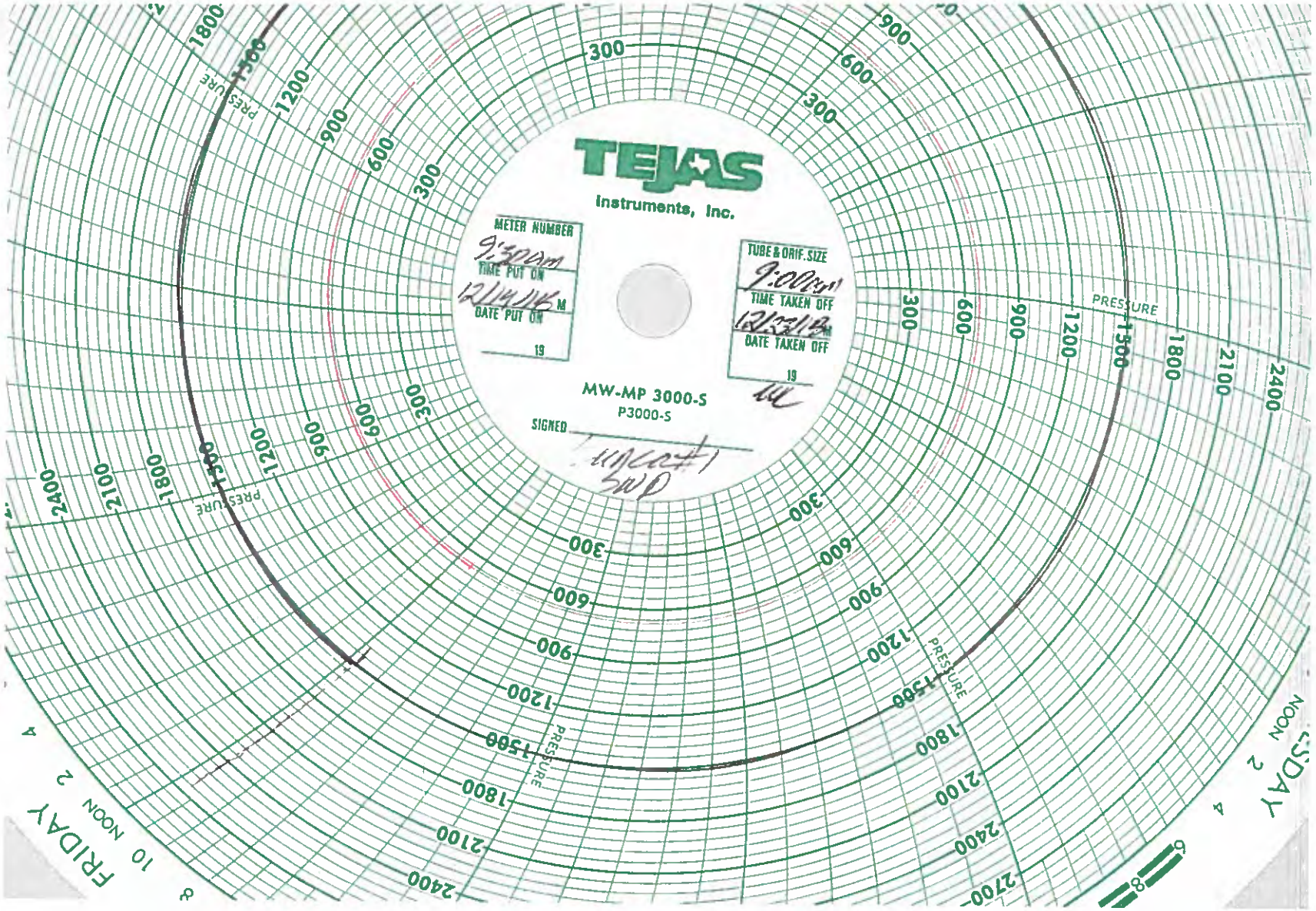

NOON
MIDNIGHT
6 PM
6 AM
CHART POOL USA Inc.
PORTAGE, INDIANA
BR 4665
(TO FIT)
11/15/13
9:00 am
11/15/13
12:00pm
0 psi
0 psi

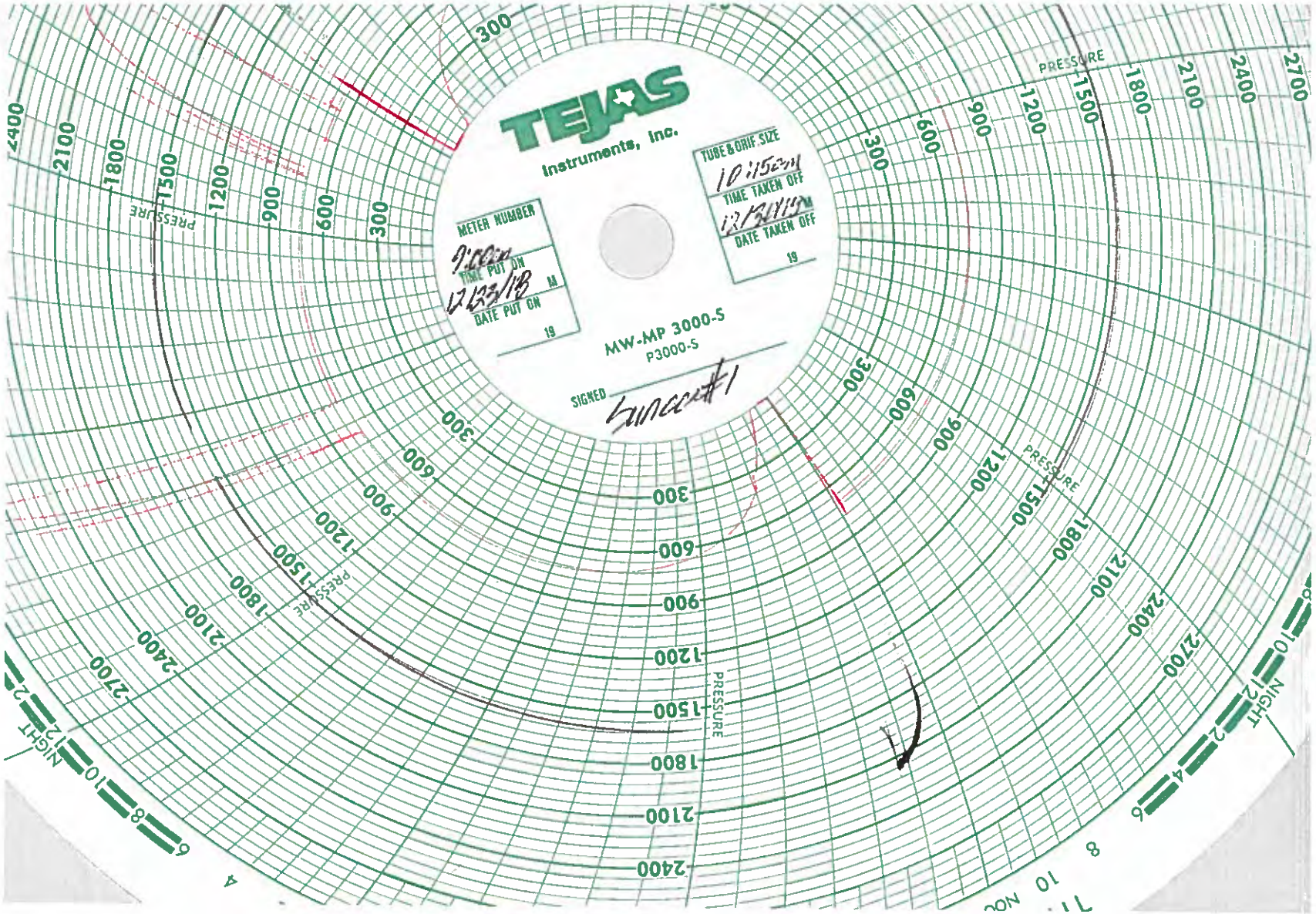

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-3000
METER
CHART PUT ON
TAKEN OFF
LOCATION
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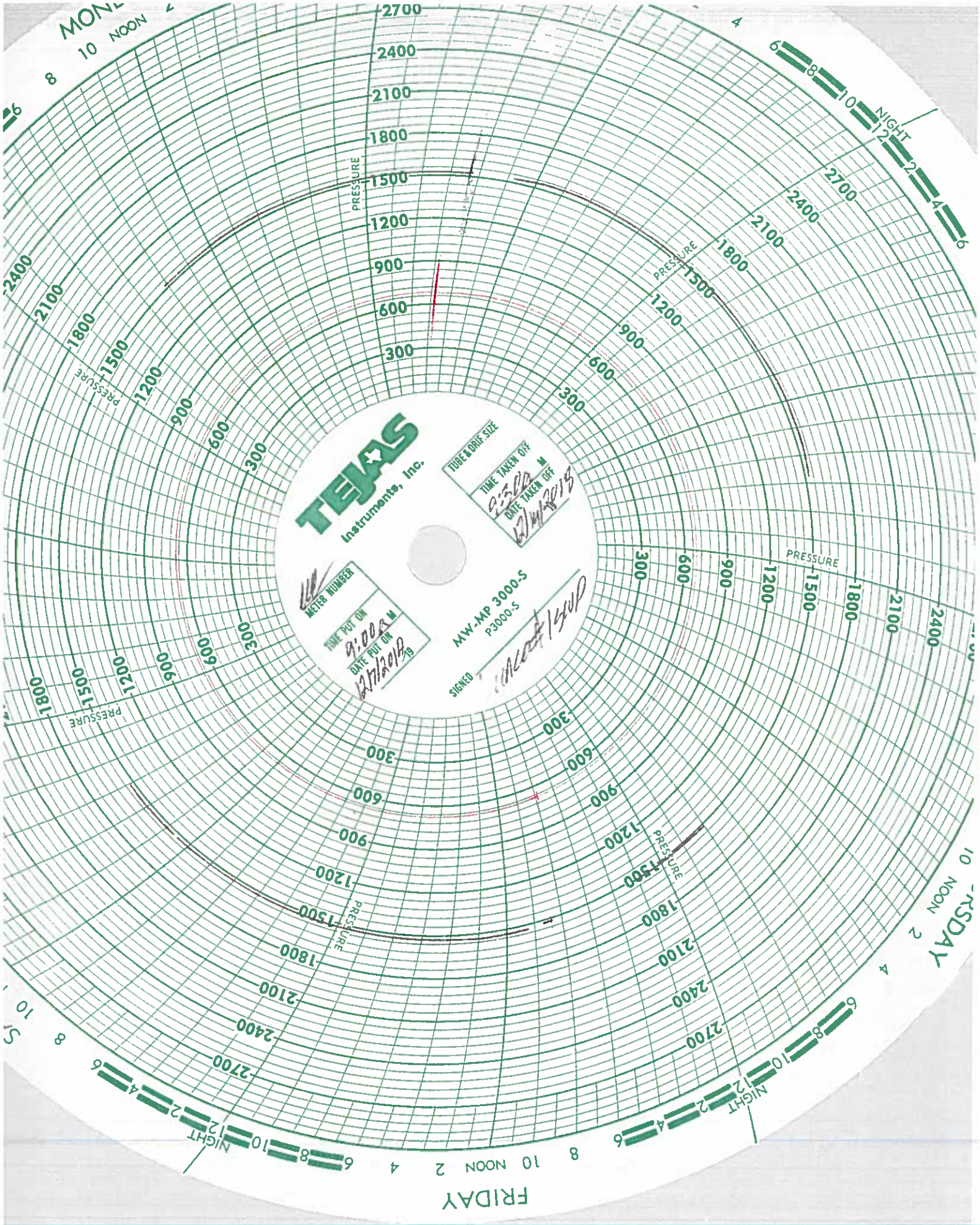

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SUNDAY
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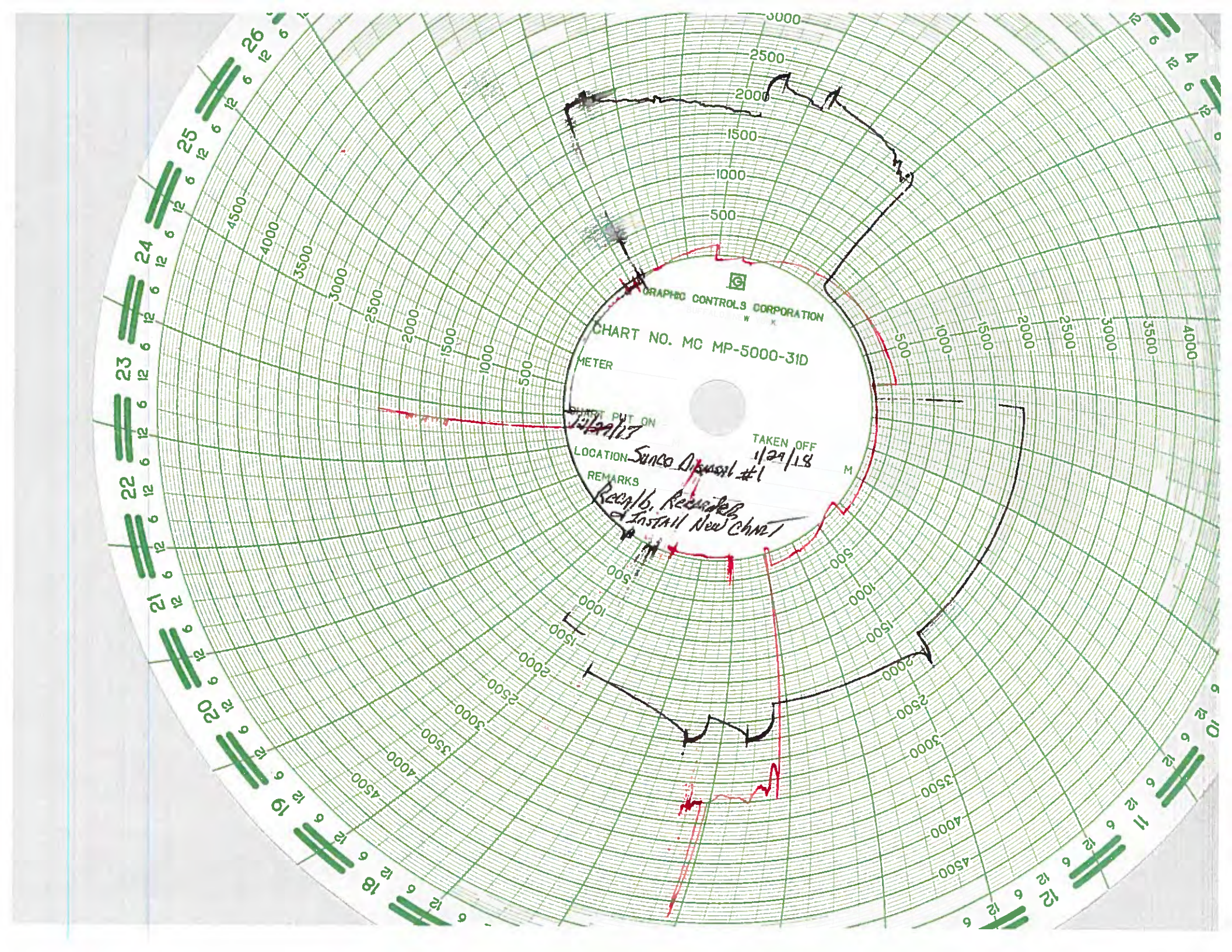
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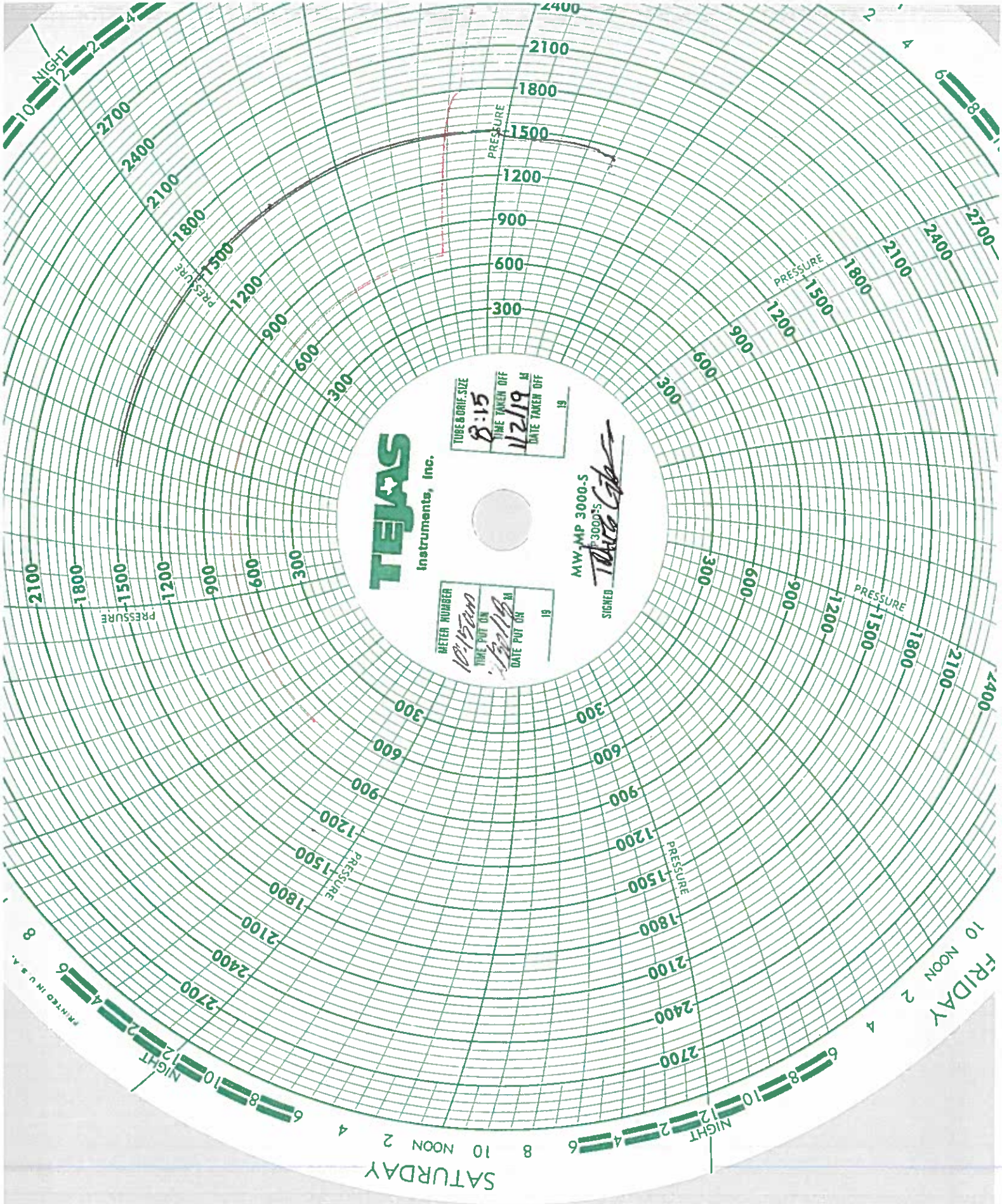
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TUBE & ORIFICE SIZE
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GRAPHIC CONTROLS CORPORATION
CHART NO. MC MP-5000-31D
METER
CHART PUT ON
1/29/18
TAKEN OFF
1/29/18
LOCATION Sunco Diesel #1
REMARKS
Recv'd, Recorded & Install New Chart


TEJAS
Instruments, Inc.
METER NUMBER
TIME PUT ON
DATE PUT ON
TUBE & ORIF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
MW-MP 3000-S
SIGNED
PRESSURE
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SATURDAY
FRIDAY

10/3/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Lyborrk Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL C Section 14 Township 23 North Range 7 West; 36.232901, -107.545978

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long), representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long), representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 11-7-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 309-6974
Surface Waste Management Facility Authorized Agent

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

October 02, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Lybrook

OrderNo.: 1809431

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/7/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1809431**
Date Reported: **10/2/2018**

CLIENT: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1809431-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 11:42:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **JLF**
Mercury	ND	0.020		mg/L	1	9/13/2018 12:14:13 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	9/15/2018 10:54:24 AM
Barium	ND	100		mg/L	1	9/15/2018 10:54:24 AM
Cadmium	ND	1.0		mg/L	1	9/15/2018 10:54:24 AM
Chromium	ND	5.0		mg/L	1	9/15/2018 10:54:24 AM
Lead	ND	5.0		mg/L	1	9/15/2018 12:27:53 PM
Selenium	ND	1.0		mg/L	1	9/15/2018 10:54:24 AM
Silver	ND	5.0		mg/L	1	9/15/2018 10:54:24 AM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
1-Methylnaphthalene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
2-Methylnaphthalene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Acenaphthylene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Acenaphthene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Fluorene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Phenanthrene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Anthracene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Pyrene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Benz(a)anthracene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Chrysene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Benzo(b)fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Benzo(k)fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Benzo(a)pyrene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	10	9/18/2018 9:50:10 PM
Surr: N-hexadecane	79.5	35.2-113	D	%Rec	10	9/18/2018 9:50:10 PM
Surr: Benzo(e)pyrene	69.0	48.3-123	D	%Rec	10	9/18/2018 9:50:10 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	9/12/2018 4:57:00 PM
Toluene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Ethylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM

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: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1809431-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 11:42:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Naphthalene	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	9/12/2018 4:57:00 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	9/12/2018 4:57:00 PM
Acetone	ND	2.0		mg/L	200	9/12/2018 4:57:00 PM
Bromobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Bromodichloromethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Bromoform	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Bromomethane	ND	0.60		mg/L	200	9/12/2018 4:57:00 PM
2-Butanone	ND	2.0		mg/L	200	9/12/2018 4:57:00 PM
Carbon disulfide	ND	2.0		mg/L	200	9/12/2018 4:57:00 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Chlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Chloroethane	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
Chloroform	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Chloromethane	ND	0.60		mg/L	200	9/12/2018 4:57:00 PM
2-Chlorotoluene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
4-Chlorotoluene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
cis-1,2-DCE	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
Dibromochloromethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Dibromomethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
2-Hexanone	ND	2.0		mg/L	200	9/12/2018 4:57:00 PM
Isopropylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	9/12/2018 4:57:00 PM
Methylene Chloride	ND	0.60		mg/L	200	9/12/2018 4:57:00 PM

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: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1809431-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 11:42:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	9/12/2018 4:57:00 PM
n-Propylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
sec-Butylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Styrene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
tert-Butylbenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
trans-1,2-DCE	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	9/12/2018 4:57:00 PM
Vinyl chloride	ND	0.20		mg/L	200	9/12/2018 4:57:00 PM
Xylenes, Total	ND	0.30		mg/L	200	9/12/2018 4:57:00 PM
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	200	9/12/2018 4:57:00 PM
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	200	9/12/2018 4:57:00 PM
Surr: Dibromofluoromethane	100	70-130		%Rec	200	9/12/2018 4:57:00 PM
Surr: Toluene-d8	93.1	70-130		%Rec	200	9/12/2018 4:57:00 PM

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9240 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180911033
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1809431
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180911033-001	**Sampling Date**	9/5/2018	**Date/Time Received**	9/11/2018 11:28 AM
Client Sample ID	1809431-001D / BGT	**Sampling Time**	11:42 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	9/14/2018 10:40:00 AM	BKP	SW846 CH7	
Flashpoint	>200	°F		9/13/2018 4:40:00 PM	GPB	EPA 1010	
pH	6.45	ph Units		9/12/2018 11:00:00 AM	LAC	SM 4500pH B	
Reactive sulfide	0.236	mg/L	0.2	9/11/2018 1:30:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180911033
Project Name: 1809431

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide (reactive)	0.561	mg/L	0.5	112.2	80-120	9/13/2018	9/14/2018
Reactive sulfide	0.100	mg/L	0.2	90.0	70-130	9/11/2018	9/11/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180911034-001	Reactive sulfide	0.505	0.816	mg/L	0.389	79.9	70-130	9/11/2018	9/11/2018
180911033-001	Cyanide (reactive)	ND	0.544	mg/L	0.5	108.8	80-120	9/13/2018	9/14/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.540	mg/L	0.5	108.0	0.7	0-25	9/13/2018	9/14/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	9/13/2018	9/14/2018
Reactive sulfide	ND	mg/L	0.1	9/11/2018	9/11/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013, AZ: 0701, FL(NELAP): E87693, ID:IDC00013; MT: CERTC028; NM: ID00013,NV: ID00013, OR: ID200001-002; WA: C586
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: A54097	RunNo: 54097
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789046 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.3		10.00		93.1	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A54097	RunNo: 54097
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A54097	RunNo: 54097
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A54097	RunNo: 54097							
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID 1809431-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: BGT	Batch ID: A54097	RunNo: 54097							
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789053	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.20	4.000	0	101	60.5	137			
Toluene	3.7	0.20	4.000	0	93.4	70	130			
Chlorobenzene	3.8	0.20	4.000	0	94.1	70	130			
1,1-Dichloroethene	4.2	0.20	4.000	0	104	70	130			
Trichloroethene (TCE)	3.8	0.20	4.000	0	95.6	70	130			
Surr: 1,2-Dichloroethane-d4	1.9		2.000		93.7	70	130			
Surr: 4-Bromofluorobenzene	2.0		2.000		99.3	70	130			
Surr: Dibromofluoromethane	2.0		2.000		101	70	130			
Surr: Toluene-d8	1.8		2.000		92.1	70	130			

Sample ID 1809431-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID: BGT	Batch ID: A54097	RunNo: 54097							
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789054	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.0	0.20	4.000	0	99.1	60.5	137	2.33	20	
Toluene	3.6	0.20	4.000	0	89.6	70	130	4.16	20	
Chlorobenzene	3.6	0.20	4.000	0	90.4	70	130	4.01	20	
1,1-Dichloroethene	4.0	0.20	4.000	0	100	70	130	3.80	20	
Trichloroethene (TCE)	3.7	0.20	4.000	0	92.5	70	130	3.39	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		98.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.9		2.000		96.8	70	130	0	0	
Surr: Dibromofluoromethane	2.0		2.000		101	70	130	0	0	
Surr: Toluene-d8	1.8		2.000		89.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID lcs-40295	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 40295	RunNo: 54237
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794213 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	60.2	28.6	113			
1-Methylnaphthalene	14	0.50	20.00	0	71.0	27	113			
2-Methylnaphthalene	13	0.50	20.00	0	62.8	26.3	112			
Acenaphthylene	13	0.50	20.00	0	65.7	36.2	114			
Acenaphthene	12	0.50	20.00	0	58.9	35.6	116			
Fluorene	13	0.50	20.00	0	62.8	38.4	116			
Phenanthrene	13	0.50	20.00	0	66.3	42.3	118			
Anthracene	13	0.50	20.00	0	65.6	42.2	117			
Fluoranthene	14	0.50	20.00	0	71.9	42.5	118			
Pyrene	16	0.50	20.00	0	77.6	40.8	121			
Benz(a)anthracene	15	0.50	20.00	0	74.5	43	118			
Chrysene	14	0.50	20.00	0	69.9	39.4	119			
Benzo(b)fluoranthene	14	0.50	20.00	0	67.5	47.8	115			
Benzo(k)fluoranthene	15	0.50	20.00	0	75.0	40.5	120			
Benzo(a)pyrene	14	0.50	20.00	0	68.1	41.5	115			
Dibenz(a,h)anthracene	11	0.50	20.00	0	55.8	48.6	115			
Benzo(g,h,i)perylene	12	0.50	20.00	0	62.2	42	119			
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	69.6	42.9	118			
Surr: N-hexadecane	65		87.60		73.9	35.2	113			
Surr: Benzo(e)pyrene	18		20.00		90.8	48.3	123			

Sample ID lcsd-40295	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 40295	RunNo: 54237
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794214 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	11	0.50	20.00	0	55.1	28.6	113	8.85	40.7	
1-Methylnaphthalene	13	0.50	20.00	0	64.0	27	113	10.4	38.4	
2-Methylnaphthalene	12	0.50	20.00	0	57.7	26.3	112	8.46	25.5	
Acenaphthylene	13	0.50	20.00	0	66.3	36.2	114	0.909	34.1	
Acenaphthene	12	0.50	20.00	0	61.6	35.6	116	4.48	32.1	
Fluorene	13	0.50	20.00	0	65.9	38.4	116	4.82	28	
Phenanthrene	14	0.50	20.00	0	68.1	42.3	118	2.68	37.4	
Anthracene	13	0.50	20.00	0	65.6	42.2	117	0	36.2	
Fluoranthene	15	0.50	20.00	0	74.8	42.5	118	3.95	26.6	
Pyrene	14	0.50	20.00	0	69.0	40.8	121	11.7	26.8	
Benz(a)anthracene	13	0.50	20.00	0	64.7	43	118	14.1	25.1	
Chrysene	12	0.50	20.00	0	61.1	39.4	119	13.4	23.3	
Benzo(b)fluoranthene	14	0.50	20.00	0	69.7	47.8	115	3.21	22.5	

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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID lcsd-40295	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 40295	RunNo: 54237
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794214 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	73.3	40.5	120	2.29	30.9	
Benzo(a)pyrene	14	0.50	20.00	0	69.4	41.5	115	1.89	23.2	
Dibenz(a,h)anthracene	11	0.50	20.00	0	55.1	48.6	115	1.26	26.5	
Benzo(g,h,i)perylene	12	0.50	20.00	0	62.1	42	119	0.161	30.7	
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	68.5	42.9	118	1.59	25.4	
Surr: N-hexadecane	61		87.60		70.0	35.2	113	0	0	
Surr: Benzo(e)pyrene	15		20.00		76.5	48.3	123	0	0	

Sample ID mb-40295	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 40295	RunNo: 54237
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794215 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	64		87.60		72.9	35.2	113			
Surr: Benzo(e)pyrene	16		20.00		81.5	48.3	123			

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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID	MB-40321	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	40321	RunNo:	54130					
Prep Date:	9/12/2018	Analysis Date:	9/13/2018	SeqNo:	1789572	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-40321	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	40321	RunNo:	54130					
Prep Date:	9/12/2018	Analysis Date:	9/13/2018	SeqNo:	1789573	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID MB-40282	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791212 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								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-40282	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791214 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.6	80	120			
Barium	0.51	0.020	0.5000	0	102	80	120			
Cadmium	0.52	0.0020	0.5000	0	103	80	120			
Chromium	0.49	0.0060	0.5000	0	98.6	80	120			
Selenium	0.50	0.050	0.5000	0	99.9	80	120			
Silver	0.11	0.0050	0.1000	0	107	80	120			

Sample ID 1809431-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: BGT	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791226 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	75	125			
Barium	0.59	0.020	0.5000	0.07543	103	75	125			
Cadmium	0.51	0.0020	0.5000	0	103	75	125			
Chromium	0.49	0.0060	0.5000	0.002330	97.3	75	125			
Selenium	0.47	0.050	0.5000	0	94.7	75	125			
Silver	0.11	0.0050	0.1000	0	107	75	125			

Sample ID 1809431-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: BGT	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791227 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	97.4	75	125	2.05	20	
Barium	0.59	0.020	0.5000	0.07543	102	75	125	0.413	20	
Cadmium	0.51	0.0020	0.5000	0	102	75	125	0.193	20	
Chromium	0.49	0.0060	0.5000	0.002330	96.8	75	125	0.502	20	

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#: 1809431

02-Oct-18

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID 1809431-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: BGT	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791227 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.48	0.050	0.5000	0	96.5	75	125	1.95	20	
Silver	0.11	0.0050	0.1000	0	107	75	125	0.149	20	

Sample ID LCS-40282	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791247 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.50	0.0050	0.5000	0	100	80	120			

Sample ID MB-40282	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791248 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID 1809431-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: BGT	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791260 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.51	0.0050	0.5000	0	102	75	125			

Sample ID 1809431-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: BGT	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791261 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.51	0.0050	0.5000	0	101	75	125	0.576	20	

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: SMA-FARM | Work Order Number: 1809431 | RcptNo: 1

Received By: Anne Thorne 9/7/2018 6:30:00 AM Anne Thorne

Completed By: Anne Thorne 9/10/2018 8:47:08 AM Anne Thorne

Reviewed By: ENM 9/10/18

Labeled by: JAB 09/10/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1; 2 (<2 or >12 unless noted)

Adjusted? No

Checked by: JAB 09/10/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.2	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401

Phone #: 505-325-7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Lybrook

Project #:

Project Manager: Ashley Maxwell

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 2 +0.2 = 2.2 °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. 1809431	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI				Air Bubbles (Y or N)
9-5-18	11:42	Aqueous	BGT	Various	Various	001						X	X			X		X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/6/18	1530			9/6/18	1530
9/6/18	1748			09/07/18	0750

Remarks: 8260 Full List + Report TCLP compound at TCLP limit
Invoice Enterprise CC: Tom Long

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.

10/3/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL San Luis Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL F Section 13 Township 17 North Range 3 East; 35.704883, -107.106298

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long), representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long), representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 11-7-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 307-6974
Surface Waste Management Facility Authorized Agent

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

October 02, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: San Luis

OrderNo.: 1809432

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/7/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1809432**
Date Reported: **10/2/2018**

CLIENT: Souder, Miller and Associates
Project: San Luis
Lab ID: 1809432-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 9:34:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **JLF**
Mercury	ND	0.020		mg/L	1	9/13/2018 12:16:31 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	9/15/2018 10:59:06 AM
Barium	ND	100		mg/L	1	9/15/2018 10:59:06 AM
Cadmium	ND	1.0		mg/L	1	9/15/2018 10:59:06 AM
Chromium	ND	5.0		mg/L	1	9/15/2018 10:59:06 AM
Lead	ND	5.0		mg/L	1	9/15/2018 12:32:34 PM
Selenium	ND	1.0		mg/L	1	9/15/2018 10:59:06 AM
Silver	ND	5.0		mg/L	1	9/15/2018 10:59:06 AM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
1-Methylnaphthalene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
2-Methylnaphthalene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Acenaphthylene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Acenaphthene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Fluorene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Phenanthrene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Anthracene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Pyrene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Benz(a)anthracene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Chrysene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Benzo(b)fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Benzo(k)fluoranthene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Benzo(a)pyrene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	10	9/18/2018 10:14:26 PM
Surr: N-hexadecane	76.9	35.2-113	D	%Rec	10	9/18/2018 10:14:26 PM
Surr: Benzo(e)pyrene	66.0	48.3-123	D	%Rec	10	9/18/2018 10:14:26 PM
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.50		mg/L	200	9/12/2018 6:11:00 PM
Toluene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Ethylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM

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: Souder, Miller and Associates
Project: San Luis
Lab ID: 1809432-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 9:34:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Naphthalene	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	9/12/2018 6:11:00 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	9/12/2018 6:11:00 PM
Acetone	ND	2.0		mg/L	200	9/12/2018 6:11:00 PM
Bromobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Bromodichloromethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Bromoform	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Bromomethane	ND	0.60		mg/L	200	9/12/2018 6:11:00 PM
2-Butanone	ND	2.0		mg/L	200	9/12/2018 6:11:00 PM
Carbon disulfide	ND	2.0		mg/L	200	9/12/2018 6:11:00 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Chlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Chloroethane	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
Chloroform	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Chloromethane	ND	0.60		mg/L	200	9/12/2018 6:11:00 PM
2-Chlorotoluene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
4-Chlorotoluene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
cis-1,2-DCE	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
Dibromochloromethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Dibromomethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
2-Hexanone	ND	2.0		mg/L	200	9/12/2018 6:11:00 PM
Isopropylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	9/12/2018 6:11:00 PM
Methylene Chloride	ND	0.60		mg/L	200	9/12/2018 6:11:00 PM

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: Souder, Miller and Associates
Project: San Luis
Lab ID: 1809432-001 **Matrix:** AQUEOUS

Client Sample ID: BGT
Collection Date: 9/5/2018 9:34:00 AM
Received Date: 9/7/2018 6:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**
n-Butylbenzene	ND	0.60		mg/L	200	9/12/2018 6:11:00 PM
n-Propylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
sec-Butylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Styrene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
tert-Butylbenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
trans-1,2-DCE	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1,1-Trichloroethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,1,2-Trichloroethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Trichloroethene (TCE)	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Trichlorofluoromethane	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
1,2,3-Trichloropropane	ND	0.40		mg/L	200	9/12/2018 6:11:00 PM
Vinyl chloride	ND	0.20		mg/L	200	9/12/2018 6:11:00 PM
Xylenes, Total	ND	0.30		mg/L	200	9/12/2018 6:11:00 PM
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%Rec	200	9/12/2018 6:11:00 PM
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	200	9/12/2018 6:11:00 PM
Surr: Dibromofluoromethane	102	70-130		%Rec	200	9/12/2018 6:11:00 PM
Surr: Toluene-d8	92.8	70-130		%Rec	200	9/12/2018 6:11:00 PM

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180911034
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1809432
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180911034-001	**Sampling Date**	9/5/2018	**Date/Time Received**	9/11/2018 11:28 AM
Client Sample ID	1809432-001D / BGT	**Sampling Time**	9:34 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	9/14/2018 10:40:00 AM	BKP	SW846 CH7	
Flashpoint	>200	°F		9/26/2018 4:25:00 PM	GPB	EPA 1010	
pH	6.27	ph Units		9/12/2018 11:00:00 AM	LAC	SM 4500pH-B	
Reactive sulfide	0.505	mg/L	0.19	9/11/2018 1:30:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180911034
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1809432
Attn:	ANDY FREEMAN		

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide (reactive)	0.561	mg/L	0.5	112.2	80-120	9/13/2018	9/14/2018
Reactive sulfide	0.180	mg/L	0.2	90.0	70-130	9/11/2018	9/11/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180911034-001	Reactive sulfide	0.505	0.616	mg/L	0.389	79.9	70-130	9/11/2018	9/11/2018
180911033-001	Cyanide (reactive)	ND	0.544	mg/L	0.5	108.8	80-120	9/13/2018	9/14/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.540	mg/L	0.5	108.0	0.7	0-25	9/13/2018	9/14/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/l	1	9/13/2018	9/14/2018
Reactive sulfide	ND	mg/L	0.1	9/11/2018	9/11/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00012; A2 0701; FL(NELAP) E87893; ID:ID00012; MT:CERT0028; NM: ID00012;NV:ID00012; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA C585; MT:Cert0095; FL(NCLAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: A54097	RunNo: 54097
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789046 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.3		10.00		93.1	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A54097	RunNo: 54097
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A54097	RunNo: 54097							
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A54097	RunNo: 54097							
Prep Date:	Analysis Date: 9/12/2018	SeqNo: 1789047	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	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#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID lcs-40295	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 40295	RunNo: 54237							
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794213	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	60.2	28.6	113			
1-Methylnaphthalene	14	0.50	20.00	0	71.0	27	113			
2-Methylnaphthalene	13	0.50	20.00	0	62.8	26.3	112			
Acenaphthylene	13	0.50	20.00	0	65.7	36.2	114			
Acenaphthene	12	0.50	20.00	0	58.9	35.6	116			
Fluorene	13	0.50	20.00	0	62.8	38.4	116			
Phenanthrene	13	0.50	20.00	0	66.3	42.3	118			
Anthracene	13	0.50	20.00	0	65.6	42.2	117			
Fluoranthene	14	0.50	20.00	0	71.9	42.5	118			
Pyrene	16	0.50	20.00	0	77.6	40.8	121			
Benz(a)anthracene	15	0.50	20.00	0	74.5	43	118			
Chrysene	14	0.50	20.00	0	69.9	39.4	119			
Benzo(b)fluoranthene	14	0.50	20.00	0	67.5	47.8	115			
Benzo(k)fluoranthene	15	0.50	20.00	0	75.0	40.5	120			
Benzo(a)pyrene	14	0.50	20.00	0	68.1	41.5	115			
Dibenz(a,h)anthracene	11	0.50	20.00	0	55.8	48.6	115			
Benzo(g,h,i)perylene	12	0.50	20.00	0	62.2	42	119			
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	69.6	42.9	118			
Surr: N-hexadecane	65		87.60		73.9	35.2	113			
Surr: Benzo(e)pyrene	18		20.00		90.8	48.3	123			

Sample ID lcsd-40295	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 40295	RunNo: 54237							
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794214	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	11	0.50	20.00	0	55.1	28.6	113	8.85	40.7	
1-Methylnaphthalene	13	0.50	20.00	0	64.0	27	113	10.4	38.4	
2-Methylnaphthalene	12	0.50	20.00	0	57.7	26.3	112	8.46	25.5	
Acenaphthylene	13	0.50	20.00	0	66.3	36.2	114	0.909	34.1	
Acenaphthene	12	0.50	20.00	0	61.6	35.6	116	4.48	32.1	
Fluorene	13	0.50	20.00	0	65.9	38.4	116	4.82	28	
Phenanthrene	14	0.50	20.00	0	68.1	42.3	118	2.68	37.4	
Anthracene	13	0.50	20.00	0	65.6	42.2	117	0	36.2	
Fluoranthene	15	0.50	20.00	0	74.8	42.5	118	3.95	26.6	
Pyrene	14	0.50	20.00	0	69.0	40.8	121	11.7	26.8	
Benz(a)anthracene	13	0.50	20.00	0	64.7	43	118	14.1	25.1	
Chrysene	12	0.50	20.00	0	61.1	39.4	119	13.4	23.3	
Benzo(b)fluoranthene	14	0.50	20.00	0	69.7	47.8	115	3.21	22.5	

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#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID lcsd-40295	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 40295	RunNo: 54237							
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794214	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	73.3	40.5	120	2.29	30.9	
Benzo(a)pyrene	14	0.50	20.00	0	69.4	41.5	115	1.89	23.2	
Dibenz(a,h)anthracene	11	0.50	20.00	0	55.1	48.6	115	1.26	26.5	
Benzo(g,h,i)perylene	12	0.50	20.00	0	62.1	42	119	0.161	30.7	
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	68.5	42.9	118	1.59	25.4	
Surr: N-hexadecane	61		87.60		70.0	35.2	113	0	0	
Surr: Benzo(e)pyrene	15		20.00		76.5	48.3	123	0	0	

Sample ID mb-40295	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 40295	RunNo: 54237							
Prep Date: 9/12/2018	Analysis Date: 9/18/2018	SeqNo: 1794215	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	64		87.60		72.9	35.2	113			
Surr: Benzo(e)pyrene	16		20.00		81.5	48.3	123			

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#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID	MB-40321	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	40321	RunNo:	54130				
Prep Date:	9/12/2018	Analysis Date:	9/13/2018	SeqNo:	1789572	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-40321	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	40321	RunNo:	54130				
Prep Date:	9/12/2018	Analysis Date:	9/13/2018	SeqNo:	1789573	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

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#: 1809432

02-Oct-18

Client: Souder, Miller and Associates

Project: San Luis

Sample ID MB-40282	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791212 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								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-40282	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791214 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.6	80	120			
Barium	0.51	0.020	0.5000	0	102	80	120			
Cadmium	0.52	0.0020	0.5000	0	103	80	120			
Chromium	0.49	0.0060	0.5000	0	98.6	80	120			
Selenium	0.50	0.050	0.5000	0	99.9	80	120			
Silver	0.11	0.0050	0.1000	0	107	80	120			

Sample ID LCS-40282	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791247 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.50	0.0050	0.5000	0	100	80	120			

Sample ID MB-40282	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40282	RunNo: 54168
Prep Date: 9/11/2018	Analysis Date: 9/15/2018	SeqNo: 1791248 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

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: SMA-FARM | Work Order Number: 1809432 | RcptNo: 1

Received By: Anne Thorne 9/7/2018 8:30:00 AM

Completed By: Anne Thorne 9/10/2018 9:04:52 AM

Reviewed By: ENM 9/10/18

Labeled by: JAB 09/10/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1;2 (<2 or >12 unless noted)

Adjusted? No

Checked by: JAB 09/10/18

Special Handling (if applicable)

15. 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: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C.	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.2	Good	Yes			

Chain-of-Custody Record

Client: EMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 5053257535

email or Fax#: ashley maxwell

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

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
San Luis

Project #:

Project Manager:
Ashley Maxwell

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 2 Codes 1.2

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. 1809432	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
9/5/18	9:31	Aqus	BGT	Various	Various	001						X	X			X		X RCI				

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/6/18	1530		Walt	9/6/18	1530
9/6/18	1748	Walt		09/07/18	0630

Remarks: 8260 Full List
TCLP compound at TCLP Limits

Invoice Enterprise cc Tom Long

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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
   JACX
2. **Originating Site:**
   Apache Plant 1402
3. **Location of Material (Street Address, City, State or ULSTR):**
   Lot 121 Rd 7000 Navajo #2
4. **Source and Description of Waste:**
   Waste water from pit tanks

Estimated Volume 50 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Dain Livingston, representative or authorized agent for JACX do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 12/20/18

SIGNATURE: Electronic TELEPHONE NO.: (575) 307-6974

Surface Waste Management Facility Authorized Agent

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Ranger Development

Chain Of Custody Number:

Samples Received: 2/1/2017 12:30:00PM

Job Number: 08135-0002

Work Order: P702004

Project Name/Location: Apache

Report Reviewed By:

Walter Hinchman, Laboratory Director — Date: 2/2/17

Tim Cain, Quality Assurance Officer — Date: 2/2/17

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879

envirotech
Analytical Laboratory

Ranger Development	Project Name:	Apache	
-	Project Number:	08135-0002	Reported:
--, -	Project Manager:	Garye Higgins	02-Feb-17 15:51

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Produced Water	P702004-01A	Aqueous	01/01/17	02/01/17	Plastic Drinking Water Bottle

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Analytical Laboratory

Ranger Development	Project Name:	Apache	
-	Project Number:	08135-0002	Reported:
- -, -	Project Manager:	Garye Higgins	02-Feb-17 15:51

Produced Water
P702004-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Corrosivity									
pH @25°C	6.73		pH Units	1	1705020	02/02/17 14:21	02/02/17 14:46	9045D/9040 C	H1
Waste Characteristic									
Flash Point	>95		°C	1	1705008	01/31/17	02/01/17	ASTM D93-10a	
Reactivity	Negative		N/A	1	1705009	01/31/17	02/01/17		H2

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Analytical Laboratory

Ranger Development	Project Name:	Apache	
-	Project Number:	08135-0002	Reported:
--,-	Project Manager:	Garye Higgins	02-Feb-17 15:51

Corrosivity - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1705020 - No Prep Wet Chem										
LCS (1705020-BS1)				Prepared & Analyzed: 02-Feb-17						
pH	8.00		pH Units				98.75-101.25			
Duplicate (1705020-DUP1)		Source: P702004-01		Prepared & Analyzed: 02-Feb-17						
pH	6.75		pH Units		6.73			0.297	20	

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Analytical Laboratory

Ranger Development	Project Name:	Apache	
-	Project Number:	08135-0002	Reported:
- -, -	Project Manager:	Garye Higgins	02-Feb-17 15:51

Notes and Definitions

H2	Sample was analyzed after regulatory hold-time exceeded for target analyte.
H1	Sample was received after regulatory hold-time exceeded for target analyte.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Client: Ranger Development
Project: Apache
Sampler: Russell Gibbs
Phone: 940 886 7849
Email(s): russell@iacx.com aguamossgiggins@hotmail.com
Project Manager: Russell Gibbs

RUSH? ☑ 1d ☐ 3d

Lab Use Only	
Lab WO#	P702004
Job Number	08135-0002

Page 1 of 1

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	TCLP Metals	CO Table 910-1	TDS	RCI		Lab Number	Correct Cont/Prsrv (s) Y/N
Produced Water	01-01-17	3:00pm	Ag	1-drinking H_2O bottle								✓		1	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	1 Feb 17	12:30	[signature]	02-01-17	12:32
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
**Received on Ice Y / (N)
T1 20.8 T2____ T3____
AVG Temp °C 20.8

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____
Container Type: g - glass, p - poly/plastic, ag - amber glass
**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.
☐ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing Info:

Page 6 of 8

envirotech Analytical Laboratory
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District I
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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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

HEAVY OIL SOLUTIONS, 531 ROVER BLVD, LOS ALAMOS NM 87547

2. Originating Site:

HEAVY OIL SOLUTIONS, 5101 COLLEGE BLVD, FARMINGTON, NM 87402

3. Location of Material (Street Address, City, State or ULSTR):

HEAVY OIL SOLUTIONS, 5101 COLLEGE BLVD, FARMINGTOU NM 87402

4. Source and Description of Waste:

PRODUCED WATER FROM OIL UPGRADING PROCESS DEVELOPMENT PILOT

Estimated Volume 4/21 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, STEVE YARBRO, representative or authorized agent for HEAVY OIL SOLUTIONS do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, STEVE YARBRO, representative for HEAVY OIL SOLUTIONS do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

M&R Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Sunco Disposal #1 UICI-5-0

Address of Facility: SW/4 NW/4 Section 2, T29N, R12W San Juan County, Crouch Mesa Facility

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ APPROVED ☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Philana Thompson TITLE: Regulatory Compliance Specialist DATE: 9/6/18

SIGNATURE: Philana Thompson TELEPHONE NO.: 505-486-1171

Surface Waste Management Facility Authorized Agent

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Heavy Oil Solutions

Chain Of Custody Number:

Samples Received: 8/21/2018 2:45:00PM

Job Number: 17014-0001

Work Order: P808039

Project Name/Location: No Recycle

Report Reviewed By: Walter Hinchman Date: 8/28/18

Walter Hinchman, Laboratory Director

Date: 8/28/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	Reported:
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	08/28/18 14:55

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
0921-01	P808039-01A	Aqueous	08/21/18	08/21/18	Poly 500mL

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envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	08/28/18 14:55

0921-01

P808039-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Corrosivity									
pH @25°C	7.94		pH Units	1	1834019	08/24/18 10:20	08/24/18 12:36	9045D/9040 C	H1
Waste Characteristic									
Flash Point	>95		°C	1	1833022	08/24/18	08/24/18	ASTM D93-10a	
Reactivity	Negative		N/A	1	1834021	08/24/18	08/24/18	Reactivity**	

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laboratory@envirotech-inc.com

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	08/28/18 14:55

Corrosivity - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1834019 - Wet Chemistry Preparation										
LCS (1834019-BS1)				Prepared & Analyzed: 08/24/18 1						
pH	8.01		pH Units	8.00		100	98.75-101.25			
Duplicate (1834019-DUP1)		**Source: P808039-01**		Prepared & Analyzed: 08/24/18 1						
pH	7.99		pH Units		7.94			0.628	20	

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	08/28/18 14:55

Waste Characteristic - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1833022 - Wet Chemistry Preparation										
LCS (1833022-BS1)				Prepared & Analyzed: 08/17/18 1						
Flash Point	66		°C	65.0		102	95-105			
Duplicate (1833022-DUP1)		**Source: P808032-03**		Prepared & Analyzed: 08/17/18 1						
Flash Point	>95		°C		0				20	

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	08/28/18 14:55

Notes and Definitions

H1	Sample was received after regulatory hold-time exceeded for target analyte
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods

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Project Information

Chain of Custody

Page 1 of 1

Client: Heavy Oil Solutions	Report Attention
Project: No Recycle	Report due by:
Project Manager: Steve Yarbro	Attention:
Address: 5101 College Blve - QCB 5314	Address:
City, State, Zip Farmington, NM 87402	City, State, Zip
Phone: 505.412.2934	Phone:
Email: steve.yarbro@heavyoilsolutions.com	Email:

Lab Use Only: Lab WO# P808039 | Job Number 1704-0001

TAT: 1D | 3D

EPA Program: RCRA | CWA | SDWA

State: NM | CO | UT | AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	Karl Fischer Water Analysis	Density	Viscosity	C,N,H	total sulfur	BS&W	Bromine #	BERK PLT	Remarks
1030	08/21	A	1	0921-1									X	TO INCLUDE PH, IGNITABILITY, CORROSISION AND REACTIVITY
													Per STEVE 8/22/18 TC	

Analysis and Method

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: NB

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Kenneth Hall Jr	8/21/18	1445		8/21/18	1445
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only: Received on ice: Y / N (1) | T1 ____ T2 ____ T3 ____ | AVG Temp °C 2.1

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

Page 7 of 7

envirotech Analytical Laboratory
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Three Springs - 45 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Heavy Oil Solutions

Chain Of Custody Number:

Samples Received: 9/9/2018 11:57:00AM

Job Number: 17014-0001

Work Order: P809014

Project Name/Location: No Recycle

Report Reviewed By: _____ Date: 9/13/18

Walter Hinchman, Laboratory Director

_____ Date: 9/13/18

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	09/13/18 16:48

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Paint Filter - Prod Water	P809014-01A	Aqueous	09/10/18	09/09/18	Poly 500mL

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	Reported:
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	09/13/18 16:48

Paint Filter - Prod Water

P809014-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Wet Chemistry									
Paint Filter Test	100		ml	1	1837027	09/13/18	09/13/18	EPA 9095B	

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laboratory@envirotech-inc.com

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Steve Yarbro	09/13/18 16:48

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
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Project Information

Chain of Custody

Page 1 of 1

Client: Heavy Oil Solutions
Project: No Recycle
Project Manager: Steve Yarbro
Address: 5101 College Blve - QCB 5314
City, State, Zip Farmington, NM 87402
Phone: 505.412.2934
Email: steve.yarbro@heavyoilsolutions.com

Report Attention
Report due by:
Attention:
Address:
City, State, Zip
Phone:
Email:

Lab Use Only
Lab WO# P809614
Job Number 17014-0001

TAT: 1D | 3D

EPA Program: RCRA | CWA | SDWA

State: NM | CO | UT | AZ

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	C7 Insolubles	Density	High Temp SimDist	C,N,H	Bromine Number	Water in Oil	TSS	TDS	Oil & Grease	Silica	Hardness	PAINT TEST	Remarks
9am	9/10/18	A		Paint Test - Prod Water	1												X	
				Per Ron 9/10/18 TC														

Additional Instructs: Via ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Mike Brown

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Ron Haarland	9/9/18	11:57	[signature]	9/9/18	1157

Lab Use Only
Received on ice: Y / N
T1 T2 T3
AVG Temp °C 2.0

Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

Page 5 of 5

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Dove Creek Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL A Section 9 Township 41 North Range 19 West; 37.836707, -108.959287, -106.190538

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR. part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorizes Agua Moss, LLC. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 12-19-18
SIGNATURE: Electronic TELEPHONE NO.: 505-307-6974
Surface Waste Management Facility Authorized Agent

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

January 16, 2018

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Water Sample at Dove Creek Station OrderNo.: 1801315

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/8/2018 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 **1801315**
Date Reported: **1/16/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services
Project: Water Sample at Dove Creek Station
Lab ID: 1801315-001 **Matrix:** AQUEOUS

Client Sample ID: Tank
Collection Date: 1/5/2018 10:42:00 AM
Received Date: 1/8/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **DBK**	
Arsenic	0.0018	0.0010		mg/L	1	1/11/2018 7:55:06 PM	35929
Lead	0.00080	0.00050		mg/L	1	1/11/2018 7:55:06 PM	35929
Selenium	ND	0.0010		mg/L	1	1/15/2018 10:23:23 AM	35929
EPA METHOD 200.7: METALS						Analyst: **pmf**	
Barium	0.12	0.0020		mg/L	1	1/11/2018 1:29:04 AM	35929
Cadmium	ND	0.0020		mg/L	1	1/11/2018 1:29:04 AM	35929
Chromium	ND	0.0060		mg/L	1	1/11/2018 1:29:04 AM	35929
Silver	ND	0.0050		mg/L	1	1/11/2018 1:29:04 AM	35929
EPA METHOD 245.1: MERCURY						Analyst: **MED**	
Mercury	ND	0.00020		mg/L	1	1/10/2018 11:30:00 AM	35927
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Acenaphthylene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Aniline	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Anthracene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Azobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benz(a)anthracene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzo(a)pyrene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzo(b)fluoranthene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzo(g,h,i)perylene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzo(k)fluoranthene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzoic acid	ND	20		µg/L	1	1/11/2018 11:27:09 AM	35949
Benzyl alcohol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Bis(2-chloroethyl)ether	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Bromophenyl phenyl ether	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Butyl benzyl phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Carbazole	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Chloro-3-methylphenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Chloroaniline	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Chloronaphthalene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Chlorophenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Chrysene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Di-n-butyl phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Di-n-octyl phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949

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: Enterprise Field Services
Project: Water Sample at Dove Creek Station
Lab ID: 1801315-001 **Matrix:** AQUEOUS

Client Sample ID: Tank
Collection Date: 1/5/2018 10:42:00 AM
Received Date: 1/8/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: DAM	
Dibenz(a,h)anthracene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Dibenzofuran	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
1,2-Dichlorobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
1,3-Dichlorobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
1,4-Dichlorobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
3,3'-Dichlorobenzidine	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Diethyl phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Dimethyl phthalate	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4-Dichlorophenol	ND	20		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4-Dimethylphenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4-Dinitrophenol	ND	20		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4-Dinitrotoluene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2,6-Dinitrotoluene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Fluoranthene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Fluorene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Hexachlorobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Hexachlorobutadiene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Hexachlorocyclopentadiene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Hexachloroethane	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Isophorone	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
1-Methylnaphthalene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Methylnaphthalene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Methylphenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
3+4-Methylphenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
N-Nitrosodimethylamine	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
N-Nitrosodiphenylamine	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Naphthalene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Nitroaniline	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
3-Nitroaniline	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Nitroaniline	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Nitrobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2-Nitrophenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
4-Nitrophenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Pentachlorophenol	ND	20		µg/L	1	1/11/2018 11:27:09 AM	35949
Phenanthrene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Phenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949

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: Enterprise Field Services
Project: Water Sample at Dove Creek Station
Lab ID: 1801315-001 **Matrix:** AQUEOUS

Client Sample ID: Tank
Collection Date: 1/5/2018 10:42:00 AM
Received Date: 1/8/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: DAM	
Pyrene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Pyridine	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
1,2,4-Trichlorobenzene	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4,5-Trichlorophenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
2,4,6-Trichlorophenol	ND	10		µg/L	1	1/11/2018 11:27:09 AM	35949
Surr: 2-Fluorophenol	34.5	15-114		%Rec	1	1/11/2018 11:27:09 AM	35949
Surr: Phenol-d5	21.7	15-97.9		%Rec	1	1/11/2018 11:27:09 AM	35949
Surr: 2,4,6-Tribromophenol	49.5	15-161		%Rec	1	1/11/2018 11:27:09 AM	35949
Surr: Nitrobenzene-d5	53.0	29.3-120		%Rec	1	1/11/2018 11:27:09 AM	35949
Surr: 2-Fluorobiphenyl	45.1	17.5-116		%Rec	1	1/11/2018 11:27:09 AM	35949
Surr: 4-Terphenyl-d14	25.9	21-92.2		%Rec	1	1/11/2018 11:27:09 AM	35949
EPA METHOD 8260B: VOLATILES						Analyst: RAA	
Benzene	5.5	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Toluene	2.9	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Ethylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Naphthalene	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Acetone	12	10		µg/L	1	1/10/2018 12:19:00 PM	R48323
Bromobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Bromoform	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Bromomethane	ND	3.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
2-Butanone	ND	10		µg/L	1	1/10/2018 12:19:00 PM	R48323
Carbon disulfide	ND	10		µg/L	1	1/10/2018 12:19:00 PM	R48323
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Chlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Chloroethane	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Chloroform	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Chloromethane	ND	3.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323

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

Qualifiers:

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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: Enterprise Field Services
Client Sample ID: Tank
Project: Water Sample at Dove Creek Station
Collection Date: 1/5/2018 10:42:00 AM
Lab ID: 1801315-001
Matrix: AQUEOUS
Received Date: 1/8/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**RAA**
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Dibromomethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
2-Hexanone	ND	10		µg/L	1	1/10/2018 12:19:00 PM	R48323
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
4-Isopropyltoluene	11	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2018 12:19:00 PM	R48323
Methylene Chloride	ND	3.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Styrene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Vinyl chloride	ND	1.0		µg/L	1	1/10/2018 12:19:00 PM	R48323
Xylenes, Total	3.0	1.5		µg/L	1	1/10/2018 12:19:00 PM	R48323
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%Rec	1	1/10/2018 12:19:00 PM	R48323

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services
Client Sample ID: Tank
Project: Water Sample at Dove Creek Station
Collection Date: 1/5/2018 10:42:00 AM
Lab ID: 1801315-001 **Matrix:** AQUEOUS **Received Date:** 1/8/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	79.5	70-130		%Rec	1	1/10/2018 12:19:00 PM	R48323
Surr: Dibromofluoromethane	82.5	70-130		%Rec	1	1/10/2018 12:19:00 PM	R48323
Surr: Toluene-d8	84.2	70-130		%Rec	1	1/10/2018 12:19:00 PM	R48323

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

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID	MB-35929	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	35929	RunNo:	48348					
Prep Date:	1/9/2018	Analysis Date:	1/10/2018	SeqNo:	1552905	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID	LLLCS-35929	SampType:	LCSLL	TestCode:	EPA Method 200.7: Metals					
Client ID:	BatchQC	Batch ID:	35929	RunNo:	48348					
Prep Date:	1/9/2018	Analysis Date:	1/11/2018	SeqNo:	1552906	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Cadmium	ND	0.0020	0.002000	0	61.5	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Silver	ND	0.0050	0.005000	0	94.8	50	150			

Sample ID	LCS-35929	SampType:	LCS	TestCode:	EPA Method 200.7: Metals					
Client ID:	LCSW	Batch ID:	35929	RunNo:	48348					
Prep Date:	1/9/2018	Analysis Date:	1/11/2018	SeqNo:	1552907	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.5	85	115			
Chromium	0.48	0.0060	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			

Qualifiers:

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- 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
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- S % Recovery outside of range due to dilution or matrix
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID MSLCS-35929	SampType: LCS	TestCode: EPA 200.8: Metals
Client ID: LCSW	Batch ID: 35929	RunNo: 48389
Prep Date: 1/9/2018	Analysis Date: 1/11/2018	SeqNo: 1554931 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.012	0.00050	0.01250	0	92.5	85	115			

Sample ID MSLLLCS-35929	SampType: LCSLL	TestCode: EPA 200.8: Metals
Client ID: BatchQC	Batch ID: 35929	RunNo: 48389
Prep Date: 1/9/2018	Analysis Date: 1/11/2018	SeqNo: 1554933 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	105	50	150			
Lead	ND	0.00050	0.0005000	0	89.5	50	150			

Sample ID MB-35929	SampType: MBLK	TestCode: EPA 200.8: Metals
Client ID: PBW	Batch ID: 35929	RunNo: 48389
Prep Date: 1/9/2018	Analysis Date: 1/11/2018	SeqNo: 1554985 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								

Sample ID MB-35929	SampType: MBLK	TestCode: EPA 200.8: Metals
Client ID: PBW	Batch ID: 35929	RunNo: 48437
Prep Date: 1/9/2018	Analysis Date: 1/15/2018	SeqNo: 1557198 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID MSLLLCS-35929	SampType: LCSLL	TestCode: EPA 200.8: Metals
Client ID: BatchQC	Batch ID: 35929	RunNo: 48437
Prep Date: 1/9/2018	Analysis Date: 1/15/2018	SeqNo: 1557199 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010	0.001000	0	93.3	50	150			

Sample ID MSLCS-35929	SampType: LCS	TestCode: EPA 200.8: Metals
Client ID: LCSW	Batch ID: 35929	RunNo: 48437
Prep Date: 1/9/2018	Analysis Date: 1/15/2018	SeqNo: 1557200 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	87.3	85	115			

Qualifiers:

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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#: **1801315**

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID	MB-35927	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	35927	RunNo:	48332					
Prep Date:	1/9/2018	Analysis Date:	1/10/2018	SeqNo:	1552518	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-35927	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	35927	RunNo:	48332					
Prep Date:	1/9/2018	Analysis Date:	1/10/2018	SeqNo:	1552519	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.5	80	120			

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R48298	RunNo: 48298						
Prep Date:	Analysis Date: 1/8/2018	SeqNo: 1551092	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.2	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		79.9	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.0	70	130			
Surr: Toluene-d8	8.3		10.00		83.0	70	130			

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R48298	RunNo: 48298						
Prep Date:	Analysis Date: 1/8/2018	SeqNo: 1551095	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		79.8	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.3	70	130			
Surr: Toluene-d8	8.4		10.00		83.6	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R48323	RunNo: 48323						
Prep Date:	Analysis Date: 1/9/2018	SeqNo: 1551854	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.4	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.3	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.5	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.4	70	130			
Surr: Toluene-d8	8.3		10.00		83.0	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R48323	RunNo: 48323						
Prep Date:	Analysis Date: 1/9/2018	SeqNo: 1551855	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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

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- B Analyte detected in the associated Method Blank
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- 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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R48323	RunNo: 48323							
Prep Date:	Analysis Date: 1/9/2018	SeqNo: 1551855	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R48323	RunNo: 48323
Prep Date:	Analysis Date: 1/9/2018	SeqNo: 1551855 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.0	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.2	70	130			
Surr: Toluene-d8	8.4		10.00		83.9	70	130			

Sample ID 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: A48323	RunNo: 48323
Prep Date:	Analysis Date: 1/10/2018	SeqNo: 1551886 Units: %Rec

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.2	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		81.3	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.4	70	130			
Surr: Toluene-d8	8.3		10.00		83.3	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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A48323	RunNo: 48323						
Prep Date:	Analysis Date: 1/10/2018	SeqNo: 1551887	Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.3	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		81.3	70	130			
Surr: Dibromofluoromethane	8.5		10.00		84.8	70	130			
Surr: Toluene-d8	8.4		10.00		83.6	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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID 1801315-001BMS	SampType: MS	TestCode: EPA Method 8270C: Semivolatiles
Client ID: Tank	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555252 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	93	10	100.0	0	93.0	18.1	108			
4-Chloro-3-methylphenol	1000	10	200.0	0	502	15	111			ES
2-Chlorophenol	110	10	200.0	0	55.5	15	113			
1,4-Dichlorobenzene	84	10	100.0	0	84.5	21	81.3			S
2,4-Dinitrotoluene	74	10	100.0	7.540	66.4	27.4	101			
N-Nitrosodi-n-propylamine	99	10	100.0	0	99.2	24.9	107			
4-Nitrophenol	97	10	200.0	0	48.7	15	62.2			
Pentachlorophenol	160	20	200.0	0	80.0	15	96.9			
Phenol	100	10	200.0	0	51.8	15	64.7			
Pyrene	81	10	100.0	0	80.9	29.2	111			
1,2,4-Trichlorobenzene	92	10	100.0	0	92.1	22.9	94.8			
Surr: 2-Fluorophenol	130		200.0		64.3	15	114			
Surr: Phenol-d5	91		200.0		45.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.7	15	161			
Surr: Nitrobenzene-d5	90		100.0		89.8	29.3	120			
Surr: 2-Fluorobiphenyl	85		100.0		85.0	17.5	116			
Surr: 4-Terphenyl-d14	51		100.0		50.7	21	92.2			

Sample ID 1801315-001BMSD	SampType: MSD	TestCode: EPA Method 8270C: Semivolatiles
Client ID: Tank	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555253 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	84.1	18.1	108	9.98	30.5	
4-Chloro-3-methylphenol	890	10	200.0	0	446	15	111	11.9	50	ES
2-Chlorophenol	110	10	200.0	0	55.0	15	113	0.796	36.3	
1,4-Dichlorobenzene	79	10	100.0	0	79.0	21	81.3	6.70	42.1	
2,4-Dinitrotoluene	68	10	100.0	7.540	60.1	27.4	101	8.93	28.5	
N-Nitrosodi-n-propylamine	88	10	100.0	0	87.7	24.9	107	12.3	25.4	
4-Nitrophenol	97	10	200.0	0	48.4	15	62.2	0.659	50	
Pentachlorophenol	140	20	200.0	0	71.6	15	96.9	11.2	50	
Phenol	95	10	200.0	0	47.7	15	64.7	8.19	46.1	
Pyrene	79	10	100.0	0	79.0	29.2	111	2.35	34.3	
1,2,4-Trichlorobenzene	85	10	100.0	0	84.8	22.9	94.8	8.23	43.6	
Surr: 2-Fluorophenol	130		200.0		63.4	15	114	0	0	
Surr: Phenol-d5	89		200.0		44.6	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.9	15	161	0	0	
Surr: Nitrobenzene-d5	81		100.0		80.5	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		73.4	17.5	116	0	0	

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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID 1801315-001BMSD	SampType: MSD	TestCode: EPA Method 8270C: Semivolatiles
Client ID: Tank	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555253 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	45		100.0		45.3	21	92.2	0	0	

Sample ID lcs-35949	SampType: LCS	TestCode: EPA Method 8270C: Semivolatiles
Client ID: LCSW	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555254 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	87	10	100.0	0	87.0	39.7	103			
4-Chloro-3-methylphenol	180	10	200.0	0	88.2	40.5	108			
2-Chlorophenol	180	10	200.0	0	87.8	35	103			
1,4-Dichlorobenzene	73	10	100.0	0	73.1	24.7	93.7			
2,4-Dinitrotoluene	74	10	100.0	0	74.5	35.6	91.4			
N-Nitrosodi-n-propylamine	87	10	100.0	0	87.0	41.6	114			
4-Nitrophenol	94	10	200.0	0	47.0	20.7	74.3			
Pentachlorophenol	130	20	200.0	0	64.3	25.3	98.5			
Phenol	99	10	200.0	0	49.7	20.9	75.1			
Pyrene	85	10	100.0	0	85.4	45.6	108			
1,2,4-Trichlorobenzene	81	10	100.0	0	80.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		63.4	15	114			
Surr: Phenol-d5	94		200.0		47.1	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.3	15	161			
Surr: Nitrobenzene-d5	87		100.0		87.5	29.3	120			
Surr: 2-Fluorobiphenyl	85		100.0		85.0	17.5	116			
Surr: 4-Terphenyl-d14	60		100.0		59.5	21	92.2			

Sample ID mb-35949	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles
Client ID: PBW	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555255 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

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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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID: mb-35949	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles
Client ID: PBW	Batch ID: 35949	RunNo: 48371
Prep Date: 1/10/2018	Analysis Date: 1/11/2018	SeqNo: 1555255 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

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 Quantitative 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#: 1801315

16-Jan-18

Client: Enterprise Field Services

Project: Water Sample at Dove Creek Station

Sample ID	mb-35949	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles
Client ID:	PBW	Batch ID:	35949	RunNo:	48371
Prep Date:	1/10/2018	Analysis Date:	1/11/2018	SeqNo:	1555255
Units:	µg/L				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	87		200.0		43.3	15	114			
Surr: Phenol-d5	61		200.0		30.4	15	97.9			
Surr: 2,4,6-Tribromophenol	120		200.0		61.3	15	161			
Surr: Nitrobenzene-d5	58		100.0		58.2	29.3	120			
Surr: 2-Fluorobiphenyl	53		100.0		52.6	17.5	116			
Surr: 4-Terphenyl-d14	42		100.0		41.9	21	92.2			

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: Enterprise | Work Order Number: 1801315 | RcptNo: 1

Received By: Isaiah Ortiz 1/8/2018 9:00:00 AM

Completed By: Ashley Gallegos 1/8/2018 9:42:11 AM

Reviewed By: SRC 01108/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	FedEx		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

Project Information

Chain of Custody

Page _____ of _____

Client: Enterprise Products	Report Attention
Project: Water Sample at Dove Creek Station	Report due by:
Project Manager: F Aragon	Email: tlong@eprod.com jarchuleta@eprod.com
Address:	Address:
City, State, Zip	City, State, Zip
Phone:	Phone:
Email: Gcrabtree Admin Bhall	

Lab Use Only		TAT		EPA Program		
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA
P	97057-0879	X				

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	RCRA Metals	8270							Remarks
1042	1/5/2017	A	2	Tank 1801315	-001						X							2-1 L Amber
1042	1/5/2017	A	3	Tank					X									3-40 mL VOA w/ HCl
1042	1/5/2017	A	1	Tank						X								1-500 mL poly w/ HNO3

State: NM | CO (X) | UT | AZ

Additional Instructions: RUSH SAMPLES

I, (field sampler), attest to the validity and authenticity of the sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Dustin Hall

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Dustin Hall	1/5/17	1327		1/5/17	0900
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: Y / N
T1 _____ T2 _____ T3 _____
AVG Temp °C 2.6 3.6 - 1.0 (CF)

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to these samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech
Analytical Laboratory

5796 US Highway 64 Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879

envirotech-inc.com
laboratory@envirotech-inc.com

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Dolores Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
SE ¼ Section 31 Township 37 North Range 15 West; 38.7416799, -108.433635

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 12-19-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 307-6977
Surface Waste Management Facility Authorized Agent

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number:

Samples Received: 4/12/2018 4:30:00PM

Job Number: 97057-0904

Work Order: P804028

Project Name/Location: Water Sampling @ Dolores Plant

Report Reviewed By: _____ Date: 4/24/18

Walter Hinchman, Laboratory Director

_____ Date: 4/24/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Dolores Station	P804028-01A	Aqueous	04/12/18	04/12/18	Amber, 1L
	P804028-01B	Aqueous	04/12/18	04/12/18	Amber, 1L
	P804028-01C	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL
	P804028-01D	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL
	P804028-01E	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL
	P804028-01F	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL; HCl
	P804028-01G	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL; HCl
	P804028-01H	Aqueous	04/12/18	04/12/18	VOA Vial, 40mL; HCl
	P804028-01I	Aqueous	04/12/18	04/12/18	Poly 250mL

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Dolores Station
P804028-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Volatile Organic Compounds by 8260									
Vinyl chloride	ND	0.0100	mg/l	10	1816018	04/19/18	04/19/18	EPA 8260B	
1,1-Dichloroethene	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
2-Butanone (MEK)	ND	0.200	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Chloroform	ND	0.100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Carbon Tetrachloride	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Benzene	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
1,2-Dichloroethane	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Trichloroethene	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Tetrachloroethene	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
Chlorobenzene	ND	0.0100	mg/L	10	1816018	04/19/18	04/19/18	EPA 8260B	
1,4-Dichlorobenzene	ND	0.0100	mg/l	10	1816018	04/19/18	04/19/18	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*94.8 %*		*70-130*	*1816018*	*04/19/18*	*04/19/18*	*EPA 8260B*	
Surrogate: Toluene-d8		*103 %*		*70-130*	*1816018*	*04/19/18*	*04/19/18*	*EPA 8260B*	
Surrogate: Bromofluorobenzene		*108 %*		*70-130*	*1816018*	*04/19/18*	*04/19/18*	*EPA 8260B*	
TCLP Metals									
Arsenic	ND	0.20	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Barium	ND	2.50	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Cadmium	ND	0.10	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Chromium	ND	0.20	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Lead	ND	0.10	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Selenium	ND	0.50	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Silver	ND	0.10	mg/L	10	1816001	04/17/18	04/19/18	EPA 6010C	
Corrosivity									
pH @25°C	7.45		pH Units	1	1816009	04/17/18 09:05	04/17/18 11:38	9045D/9040 C	III

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Dolores Station
P804028-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Waste Characteristic									
Flash Point	>95		°C	1	1816021	04/19/18	04/19/18	ASTM D93-10a	FP2
Reactivity	Negative		N/A	1	1816024	04/19/18	04/19/18	NA**	
TCLP Mercury by EPA 7470A									
Mercury	ND	0.00020	mg/L	1	1816013	04/18/18	04/19/18	EPA 7470A	

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816018 - Purge and Trap EPA 5030A										
Blank (1816018-BLK1)				Prepared & Analyzed: 19-Apr-18						
Vinyl chloride	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	"							
2-Butanone (MEK)	ND	0.0200	"							
Chloroform	ND	0.0100	"							
Carbon Tetrachloride	ND	0.0010	"							
Benzene	ND	0.0010	"							
1,2-Dichloroethane	ND	0.0010	"							
Trichloroethene	ND	0.0010	"							
Tetrachloroethene	ND	0.0010	"							
Chlorobenzene	ND	0.0010	"							
1,4-Dichlorobenzene	ND	0.0010	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00980*		"	*0.0100*		*98.0*	*70-130*			
Surrogate: Toluene-d8	*0.0101*		"	*0.0100*		*101*	*70-130*			
Surrogate: Bromofluorobenzene	*0.0111*		"	*0.0100*		*111*	*70-130*			
LCS (1816018-BS1)				Prepared & Analyzed: 19-Apr-18						
Vinyl chloride	0.0484	0.0010	mg/L	0.0500		96.8	80-120			
1,1-Dichloroethene	0.0471	0.0010	"	0.0500		94.2	80-120			
2-Butanone (MEK)	0.0930	0.0200	"	0.100		93.0	45-165			
Chloroform	0.0499	0.0100	"	0.0500		99.9	80-120			
Carbon Tetrachloride	0.0497	0.0010	"	0.0500		99.4	70-130			
Benzene	0.0519	0.0010	"	0.0500		104	70-130			
1,2-Dichloroethane	0.0487	0.0010	"	0.0500		97.4	70-130			
Trichloroethene	0.0535	0.0010	"	0.0500		107	70-130			
Tetrachloroethene	0.0501	0.0010	"	0.0500		100	70-130			
Chlorobenzene	0.0473	0.0010	"	0.0500		94.7	70-130			
1,4-Dichlorobenzene	0.0479	0.0010	"	0.0500		95.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.00952*		"	*0.0100*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*0.0104*		"	*0.0100*		*104*	*70-130*			
Surrogate: Bromofluorobenzene	*0.0106*		"	*0.0100*		*106*	*70-130*			
Matrix Spike (1816018-MS1)	**Source: P804028-01**			Prepared & Analyzed: 19-Apr-18						
Vinyl chloride	0.476	0.0100	mg/L	0.500	ND	95.3	44-143			
1,1-Dichloroethene	0.479	0.0100	"	0.500	ND	95.9	49-144			
2-Butanone (MEK)	0.993	0.200	"	1.00	ND	99.3	40-170			
Chloroform	0.504	0.100	"	0.500	ND	101	66-133			
Carbon Tetrachloride	0.505	0.0100	"	0.500	ND	101	61-139			
Benzene	0.526	0.0100	"	0.500	ND	105	59-133			
1,2-Dichloroethane	0.489	0.0100	"	0.500	ND	97.9	62-138			
Trichloroethene	0.480	0.0100	"	0.500	ND	96.1	49-148			
Tetrachloroethene	0.498	0.0100	"	0.500	ND	99.7	57-141			

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816018 - Purge and Trap EPA 5030A										
Matrix Spike (1816018-MS1)	**Source: P804028-01**			Prepared & Analyzed: 19-Apr-18						
Chlorobenzene	0.470	0.0100	mg/L	0.500	ND	94.1	70-130			
1,4-Dichlorobenzene	0.484	0.0100	"	0.500	ND	96.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0951*		"	*0.100*		*95.1*	*70-130*			
Surrogate: Toluene-d8	*0.103*		"	*0.100*		*103*	*70-130*			
Surrogate: Bromofluorobenzene	*0.109*		"	*0.100*		*109*	*70-130*			
Matrix Spike Dup (1816018-MSD1)	**Source: P804028-01**			Prepared & Analyzed: 19-Apr-18						
Vinyl chloride	0.464	0.0100	mg/L	0.500	ND	92.9	44-143	2.57	30	
1,1-Dichloroethene	0.459	0.0100	"	0.500	ND	91.9	49-144	4.24	20	
2-Butanone (MEK)	0.957	0.200	"	1.00	ND	95.8	40-170	3.61	30	
Chloroform	0.487	0.100	"	0.500	ND	97.3	66-133	3.45	20	
Carbon Tetrachloride	0.494	0.0100	"	0.500	ND	98.9	61-139	2.14	20	
Benzene	0.513	0.0100	"	0.500	ND	103	59-133	2.58	20	
1,2-Dichloroethane	0.478	0.0100	"	0.500	ND	95.6	62-138	2.38	20	
Trichloroethene	0.472	0.0100	"	0.500	ND	94.4	49-148	1.85	20	
Tetrachloroethene	0.483	0.0100	"	0.500	ND	96.6	57-141	3.08	20	
Chlorobenzene	0.462	0.0100	"	0.500	ND	92.3	70-130	1.91	20	
1,4-Dichlorobenzene	0.470	0.0100	"	0.500	ND	94.0	70-130	2.96	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0960*		"	*0.100*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*0.103*		"	*0.100*		*103*	*70-130*			
Surrogate: Bromofluorobenzene	*0.109*		"	*0.100*		*109*	*70-130*			

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10 00

TCLP Metals - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816001 - Metals Water Hotblock Digestion EPA 3010A/200.2										
Blank (1816001-BLK1)				Prepared: 16-Apr-18 Analyzed: 17-Apr-18						
Arsenic	ND	0.02	mg/L							
Barium	ND	0.25	"							
Cadmium	ND	0.01	"							
Chromium	ND	0.02	"							
Lead	ND	0.01	"							
Selenium	ND	0.05	"							
Silver	ND	0.01	"							
LCS (1816001-BS1)				Prepared: 16-Apr-18 Analyzed: 17-Apr-18						
Arsenic	0.91	0.02	mg/L	1.00		90.8	80-120			
Barium	20.5	0.25	"	25.0		82.0	80-120			
Cadmium	0.91	0.01	"	1.00		91.3	80-120			
Chromium	0.96	0.02	"	1.00		96.3	80-120			
Lead	0.91	0.01	"	1.00		90.8	80-120			
Selenium	0.89	0.05	"	1.00		89.1	80-120			
Silver	0.09	0.01	"	0.100		91.3	80-120			
Matrix Spike (1816001-MS1)		**Source: P804025-01**		Prepared: 16-Apr-18 Analyzed: 17-Apr-18						
Arsenic	9.65	0.20	mg/L	10.0	ND	96.5	75-125			
Barium	216	2.50	"	250	ND	86.6	75-125			
Cadmium	9.54	0.10	"	10.0	ND	95.4	75-125			
Chromium	9.93	0.20	"	10.0	ND	99.3	75-125			
Lead	9.36	0.10	"	10.0	ND	93.6	75-125			
Selenium	9.42	0.50	"	10.0	ND	94.2	75-125			
Silver	0.95	0.10	"	1.00	ND	95.0	75-125			
Matrix Spike Dup (1816001-MSD1)		**Source: P804025-01**		Prepared: 16-Apr-18 Analyzed: 17-Apr-18						
Arsenic	10.0	0.20	mg/L	10.0	ND	100	75-125	3.80	20	
Barium	222	2.50	"	250	ND	88.8	75-125	2.51	20	
Cadmium	9.87	0.10	"	10.0	ND	98.7	75-125	3.37	20	
Chromium	10.2	0.20	"	10.0	ND	102	75-125	3.05	20	
Lead	9.60	0.10	"	10.0	ND	96.0	75-125	2.44	20	
Selenium	9.73	0.50	"	10.0	ND	97.3	75-125	3.23	20	
Silver	0.97	0.10	"	1.00	ND	97.2	75-125	2.29	20	

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Corrosivity - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816009 - Wet Chemistry Preparation										
LCS (1816009-BS1)				Prepared & Analyzed: 17-Apr-18						
pH	7.99		pH Units	8.00		99.9	98.75-101.25			
Duplicate (1816009-DUP1)		Source: P804023-01		Prepared & Analyzed: 17-Apr-18						
pH	7.70		pH Units		7.66			0.521	20	

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Waste Characteristic - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816021 - Wet Chemistry Preparation										
LCS (1816021-BS1)				Prepared & Analyzed: 19-Apr-18						
Flash Point	88		°C	86.0		103	95-105			
Duplicate (1816021-DUP1)		Source: P804028-01		Prepared & Analyzed: 19-Apr-18						
Flash Point	0		°C		>95				20	

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Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

TCLP Mercury by EPA 7470A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1816013 - Mercury Water Digestion KMNO4										
Blank (1816013-BLK1)				Prepared: 18-Apr-18 Analyzed: 19-Apr-18						
Mercury	ND	0.00020	mg/L							
LCS (1816013-BS1)				Prepared: 18-Apr-18 Analyzed: 19-Apr-18						
Mercury	0.00210	0.00020	mg/L	0.00200		105	80-120			
Matrix Spike (1816013-MS1)		Source: P804025-01		Prepared: 18-Apr-18 Analyzed: 19-Apr-18						
Mercury	0.00194	0.00020	mg/L	0.00200	0.00020	86.9	75-125			
Matrix Spike Dup (1816013-MSD1)		Source: P804025-01		Prepared: 18-Apr-18 Analyzed: 19-Apr-18						
Mercury	0.00188	0.00020	mg/L	0.00200	0.00020	83.9	75-125	3.17	20	

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Analytical Laboratory

Enterprise Products	Project Name:	Water Sampling @ Dolores Plant	
614 Reilly Ave	Project Number:	97057-0904	**Reported:**
Farmington NM, 87401	Project Manager:	Felipe Aragon	24-Apr-18 10:00

Notes and Definitions

H1	Sample was received after regulatory hold-time exceeded for target analyte
FP2	Halted - Boiled at 90 deg C
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

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Project Information

Chain of Custody

Page ____ of ____

Client: Enterprise Product	Report Attention
Project: Water Sample @ Dolores Plant	Report due by:
Project Manager:	Attention:
Address:	Address:
City, State, Zip	City, State, Zip
Phone:	Phone:
Email: BHall CHanson Gcabtrel Admin	Email:

Lab Use Only

Lab WO# P804028 Job Number 97037 ~~97037-001~~ 04

TAT: 1D ____ 3D ____

EPA Program: RCRA ____ CWA ____ SDWA ____

State: NM ____ CO X UT ____ AZ ____

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260 -TCLP	Metals 6010 -TCLP	Chloride 300.0	TPH 418.1	8270 -TCLP	ECT				Remarks
1426	4/12/18	A	9	Dolores station	1				X	X			X	X				2-1L amber 3voa, 3vomy/ HCl, 1-250 poly

Additional Instructions:

TCLP per Greg 4/12/18 TC — VOA iced in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Britt Hall

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Britt Hall	4/12/18	1630		4/12/18	1630
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: (Y) / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4.1

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879

ANALYTICAL REPORT

April 23, 2018

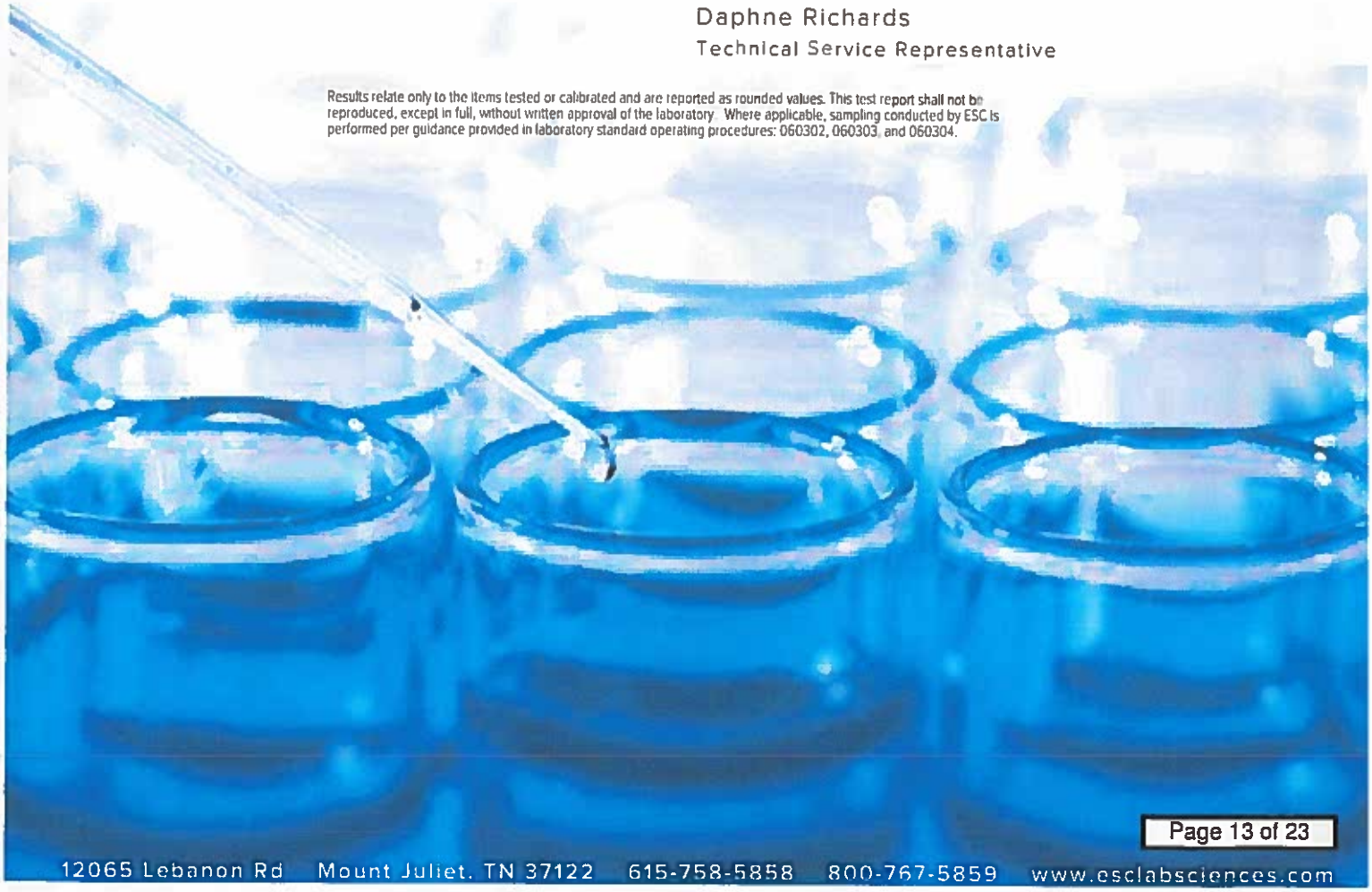
EnviroTech- NM

Sample Delivery Group:	L985875
Samples Received:	04/14/2018
Project Number:	97057-0904
Description:	Water Sampling Delores Plant
Site:	P804028
Report To:	Tim Cain and Lynn Estes 5796 US. Highway 64 Farmington, NM 87401

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

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DELORES STATION L985875-01 Waste

Collected by	Collected date/time	Received date/time
B. Hall	04/12/18 14:26	04/14/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Preparation by Method 1311	WG1098807	1	04/16/18 12:05	04/16/18 12:05	RT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1099359	1	04/18/18 23:14	04/19/18 21:38	AO

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		4/16/2018 12:05:20 PM	WG1098807
Fluid	1		4/16/2018 12:05:20 PM	WG1098807
Initial pH	6.50		4/16/2018 12:05:20 PM	WG1098807
Final pH	5.04		4/16/2018 12:05:20 PM	WG1098807

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.100	7.50	1	04/19/2018 21:38	WG1099359
2,4-Dinitrotoluene	ND		0.100	0.13	1	04/19/2018 21:38	WG1099359
Hexachlorobenzene	ND		0.100	0.13	1	04/19/2018 21:38	WG1099359
Hexachloro-1,3-butadiene	ND		0.100	0.50	1	04/19/2018 21:38	WG1099359
Hexachloroethane	ND		0.100	3	1	04/19/2018 21:38	WG1099359
Nitrobenzene	ND		0.100	2	1	04/19/2018 21:38	WG1099359
Pyridine	ND		0.100	5	1	04/19/2018 21:38	WG1099359
3&4-Methyl Phenol	ND		0.100	400	1	04/19/2018 21:38	WG1099359
2-Methylphenol	ND		0.100	200	1	04/19/2018 21:38	WG1099359
Pentachlorophenol	ND		0.100	100	1	04/19/2018 21:38	WG1099359
2,4,5-Trichlorophenol	ND		0.100	400	1	04/19/2018 21:38	WG1099359
2,4,6-Trichlorophenol	ND		0.100	2	1	04/19/2018 21:38	WG1099359
(S) 2-Fluorophenol	*48.6*		*10.0-120*	*120*		*04/19/2018 21:38*	WG1099359
(S) Phenol-d5	*36.2*		*10.0-120*	*120*		*04/19/2018 21:38*	WG1099359
(S) Nitrobenzene-d5	*60.5*		*10.0-126*	*126*		*04/19/2018 21:38*	WG1099359
(S) 2-Fluorobiphenyl	*61.0*		*22.0-127*	*127*		*04/19/2018 21:38*	WG1099359
(S) 2,4,6-Tribromophenol	*67.3*		*10.0-153*	*153*		*04/19/2018 21:38*	WG1099359
(S) p-Terphenyl-d14	*86.7*		*29.0-141*	*141*		*04/19/2018 21:38*	WG1099359

Method Blank (MB)

(MB) R3303266-1 04/19/18 16:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dichlorobenzene	U		0.0333	0.100
2,4-Dinitrotoluene	U		0.0333	0.100
Hexachlorobenzene	U		0.0333	0.100
Hexachloro-1,3-butadiene	U		0.0333	0.100
Hexachloroethane	U		0.0333	0.100
Nitrobenzene	U		0.0333	0.100
Pyridine	U		0.0333	0.100
2-Methylphenol	U		0.0333	0.100
3&4-Methyl Phenol	U		0.0333	0.100
Pentachlorophenol	U		0.0333	0.100
2,4,5-Trichlorophenol	U		0.0333	0.100
2,4,6-Trichlorophenol	U		0.0333	0.100
(S) Nitrobenzene-d5	*56.8*			*10.0-126*
(S) 2-Fluorobiphenyl	*58.1*			*22.0-127*
(S) p-Terphenyl-d14	*75.0*			*29.0-141*
(S) Phenol-d5	*37.8*			*10.0-120*
(S) 2-Fluorophenol	*51.5*			*10.0-120*
(S) 2,4,6-Tribromophenol	*65.1*			*10.0-153*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303266-2 04/19/18 15:04 • (LCSD) R3303266-3 04/19/18 15:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.0500	0.0305	0.0317	61.0	63.3	26.0-120			3.77	30
2,4-Dinitrotoluene	0.0500	0.0418	0.0417	83.6	83.3	47.0-127			0.293	21
Hexachlorobenzene	0.0500	0.0370	0.0396	74.0	79.1	41.0-124			6.62	21
Hexachloro-1,3-butadiene	0.0500	0.0287	0.0292	57.4	58.4	26.0-120			1.66	31
Hexachloroethane	0.0500	0.0315	0.0325	63.0	64.9	22.0-120			3.02	34
Nitrobenzene	0.0500	0.0318	0.0321	63.6	64.2	31.0-120			0.863	28
Pyridine	0.0500	0.0134	0.0138	26.8	27.5	10.0-120			2.58	39
2-Methylphenol	0.0500	0.0324	0.0339	64.9	67.9	26.0-120			4.47	27
3&4-Methyl Phenol	0.0500	0.0363	0.0387	72.6	77.4	27.0-120			6.32	28
Pentachlorophenol	0.0500	0.0357	0.0374	71.4	74.7	20.0-126			4.55	32
2,4,5-Trichlorophenol	0.0500	0.0400	0.0413	80.0	82.7	44.0-124			3.24	24
2,4,6-Trichlorophenol	0.0500	0.0398	0.0390	79.6	78.1	40.0-122			2.02	24
(S) Nitrobenzene-d5				*63.4*	*65.7*	*10.0-126*				
(S) 2-Fluorobiphenyl				*72.8*	*73.0*	*22.0-127*				
(S) p-Terphenyl-d14				*82.7*	*83.0*	*29.0-141*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303266-2 04/19/18 15:04 • (LCSD) R3303266-3 04/19/18 15:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) Phenol-d5				*41.8*	*42.9*	*10.0-120*				
(S) 2-Fluorophenol				*58.6*	*58.7*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*77.5*	*84.1*	*10.0-153*				

L985050-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L985050-02 04/19/18 17:32 • (MS) R3303266-4 04/19/18 17:56 • (MSD) R3303266-5 04/19/18 18:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.500	ND	0.270	0.258	54.0	51.6	1	12.0-125			4.56	23
2,4-Dinitrotoluene	0.500	ND	0.424	0.362	84.9	72.3	1	30.0-156			16.0	29
Hexachlorobenzene	0.500	ND	0.385	0.325	77.0	65.0	1	29.0-144			16.9	33
Hexachloro-1,3-butadiene	0.500	ND	0.267	0.238	53.4	47.7	1	18.0-122			11.3	35
Hexachloroethane	0.500	ND	0.271	0.258	54.1	51.7	1	12.0-120			4.56	36
Nitrobenzene	0.500	ND	0.292	0.261	58.4	52.1	1	14.0-134			11.3	32
Pyridine	0.500	ND	0.134	0.123	26.8	24.7	1	10.0-120			8.15	40
2-Methylphenol	0.500	ND	0.301	0.273	60.2	54.6	1	14.0-120			9.86	29
3&4-Methyl Phenol	0.500	ND	0.345	0.315	69.0	62.9	1	13.0-124			9.14	26
Pentachlorophenol	0.500	ND	0.399	0.325	79.8	65.0	1	10.0-160			20.4	40
2,4,5-Trichlorophenol	0.500	ND	0.408	0.357	81.6	71.5	1	15.0-160			13.2	27
2,4,6-Trichlorophenol	0.500	ND	0.397	0.338	79.4	67.6	1	10.0-153			16.0	29
(S) Nitrobenzene-d5					*57.7*	*52.2*		*10.0-126*				
(S) 2-Fluorobiphenyl					*65.4*	*58.9*		*22.0-127*				
(S) p-Terphenyl-d14					*83.6*	*72.9*		*29.0-141*				
(S) Phenol-d5					*40.3*	*36.9*		*10.0-120*				
(S) 2-Fluorophenol					*51.8*	*49.9*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*82.9*	*67.0*		*10.0-153*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable)
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



EnviroTech- NM

5796 US. Highway 64
Farmington, NM 87401

Billing Information:

Doris Moore
5796 US. Highway 64
Farmington, NM 87401

Report to: Tim + Irene

Email To: Tim + Irene

Project Description: Water sampling @ Deloes Plant

City/State Collected:

Phone: 505-632-0615
Fax:

Client Project # 87057-0904

Lab Project #

Collected by (print): B Hall

Site/Facility ID # P504028

P.O. # 1448826

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative: TCLP SVOC 8270 2/1Lamb	Rem./Contaminant	Sample # (lab only)
Deloes Station		A		4/12/18	1426	2	X		-01

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other aqueous

Remarks: 7466 1467 7847

pH ____ Temp ____

Flow ____ Other ____

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 985875

G146

Account: ENVIROFNM

Template:

Prelogin:

TSR: 288 - Daphne Richards

PB:

Shipped Via:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	4/13/18	1700	FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			904

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____

Temp: 1.1 °C Bottles Received: 2

Date: 4/14/18 Time: 9:00

Hold #

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: ENVIROFNM	SDG#	485825
Cooler Received/Opened On: 4/14/18	Temperature:	1.1
Received By: Kelsey Rish		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

2018

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Pump Canyon Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL K Section 24 Township 30 North Range 9 West; 36.795082, -107.733534

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 12-27-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 309-6974
Surface Waste Management Facility Authorized Agent

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

March 25, 2016

Ashley Maxwell

Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Pump Canyon CS

OrderNo.: 1603839

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 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 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Pump Canyon CS
Lab ID: 1603839-001 **Matrix:** AQUEOUS

Client Sample ID: Pump Canyon Non Exempt
Collection Date: 3/15/2016 1:11:00 PM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP						Analyst: **DAM**	
2-Methylphenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
3+4-Methylphenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
Phenol	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachlorobenzene	ND	0.13		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachlorobutadiene	ND	0.50		mg/L	1	3/17/2016 7:42:15 PM	24302
Hexachloroethane	ND	3.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Nitrobenzene	ND	2.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Pentachlorophenol	ND	100		mg/L	1	3/17/2016 7:42:15 PM	24302
Pyridine	ND	5.0		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/17/2016 7:42:15 PM	24302
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/17/2016 7:42:15 PM	24302
Cresols, Total	ND	200		mg/L	1	3/17/2016 7:42:15 PM	24302
Surr: 2-Fluorophenol	48.5	15-124		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: Phenol-d5	37.5	15-118		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 2,4,6-Tribromophenol	55.5	15-148		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: Nitrobenzene-d5	86.4	40.6-124		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 2-Fluorobiphenyl	81.6	35.7-128		%Rec	1	3/17/2016 7:42:15 PM	24302
Surr: 4-Terphenyl-d14	64.1	18.8-115		%Rec	1	3/17/2016 7:42:15 PM	24302
EPA METHOD 7470: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00080		mg/L	1	3/18/2016 11:09:50 AM	24317
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Arsenic	ND	0.20		mg/L	1	3/21/2016 9:08:53 AM	24322
Barium	ND	0.20		mg/L	1	3/21/2016 9:08:53 AM	24322
Cadmium	0.043	0.020		mg/L	1	3/21/2016 9:08:53 AM	24322
Chromium	0.067	0.060		mg/L	1	3/21/2016 9:08:53 AM	24322
Lead	0.089	0.050		mg/L	1	3/21/2016 9:08:53 AM	24322
Selenium	ND	0.50		mg/L	1	3/21/2016 9:08:53 AM	24322
Silver	ND	0.050		mg/L	1	3/21/2016 9:08:53 AM	24322
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Toluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Ethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024

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
R	RPD outside accepted recovery limits	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: Souder, Miller and Associates
Project: Pump Canyon CS
Lab ID: 1603839-001 **Matrix:** AQUEOUS

Client Sample ID: Pump Canyon Non Exempt
Collection Date: 3/15/2016 1:11:00 PM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: DJF	
Naphthalene	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
1-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 8:08:35 PM	R33024
Acetone	4.8	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromodichloromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromoform	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Bromomethane	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Butanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Carbon disulfide	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Carbon Tetrachloride	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloroethane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloroform	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Chloromethane	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
cis-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dibromochloromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dibromomethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloroethene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,3-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
2,2-Dichloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Hexachlorobutadiene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
2-Hexanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Isopropylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Isopropyltoluene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/23/2016 8:08:35 PM	R33024
Methylene Chloride	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024
n-Butylbenzene	ND	0.60		mg/L	200	3/23/2016 8:08:35 PM	R33024

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	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: Souder, Miller and Associates
Project: Pump Canyon CS
Lab ID: 1603839-001 **Matrix:** AQUEOUS

Client Sample ID: Pump Canyon Non Exempt
Collection Date: 3/15/2016 1:11:00 PM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Propylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
sec-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Styrene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
tert-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
trans-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Trichlorofluoromethane	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/23/2016 8:08:35 PM	R33024
Vinyl chloride	ND	0.20		mg/L	200	3/23/2016 8:08:35 PM	R33024
Xylenes, Total	ND	0.30		mg/L	200	3/23/2016 8:08:35 PM	R33024
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: Dibromofluoromethane	98.6	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024
Surr: Toluene-d8	99.1	70-130		%Rec	200	3/23/2016 8:08:35 PM	R33024

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R33024	RunNo: 33024							
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013063	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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R33024	RunNo: 33024
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013063 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID 100ng lcs b	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R33024	RunNo: 33024
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013064 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	22	1.0	20.00	0	109	70	130			
Chlorobenzene	21	1.0	20.00	0	105	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
R	RPD outside accepted recovery limits	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#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID 100ng lcs b	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R33024	RunNo: 33024
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013064 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	10		10.00		100	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
R	RPD outside accepted recovery limits	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#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID	MB-24317	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	24317	RunNo:	32894				
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008338	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24317	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	24317	RunNo:	32894				
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008339	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

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
R	RPD outside accepted recovery limits	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#: 1603839

25-Mar-16

Client: Souder, Miller and Associates

Project: Pump Canyon CS

Sample ID	MB-24322	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	PBW	Batch ID:	24322	RunNo:	32920				
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009590	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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24322	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	LCSW	Batch ID:	24322	RunNo:	32920				
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009591	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.0	80	120			
Barium	0.46	0.020	0.5000	0	92.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	93.6	80	120			
Chromium	0.46	0.0060	0.5000	0	91.5	80	120			
Lead	0.46	0.0050	0.5000	0	91.4	80	120			
Selenium	0.46	0.050	0.5000	0	91.6	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

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
R	RPD outside accepted recovery limits	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: SMA-FARM | Work Order Number: 1603839 | RcptNo: 1

Received by/date: AM 03/16/16

Logged By: Anne Thorne 3/16/2016 7:45.00 AM

Completed By: Anne Thorne 3/16/2016

Reviewed By: 03/16/16

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 ☐	# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? 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 ☐	Checked by: AJ

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	1.3	Good	Yes			

Chain-of-Custody Record

SMA

g Address: 401 W. Broadway
Farmington NM 87401
#: 505 325-7535
or Fax#: Ashley.maxwell@
Package: sandermiller.com
ndard ☐ Level 4 (Full Validation)
ditation
LAP ☐ Other
D (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Pump Canyon CS

Project #:

Project Manager: Tom Long
Ashley Maxwell

Sampler: Randy Watson

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.3-1.0CF=1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles (Y or N)
13:11	H2O	Pump Canyon Non Exempt	Various	Various	1603839 -001						X	X			X							

Time:	Relinquished by:	Received by:	Date	Time
1735	Randy Watson		3/15/10	1735
1847	Christine Walker		03/16/10	0745

Remarks: 8260 Full List's Report TCLP compounds AT TCLP Limits
Inv. Enterprise
cc: Tom Long / Enterprise

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.

2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Sandstone Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL I Section 32 Township 31 North Range 8 West; 36.853298, -107.690996

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Fireman DATE: 12-27-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 307-6974
Surface Waste Management Facility Authorized Agent

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

March 25, 2016

Ashley Maxwell

Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Sandstone CS

OrderNo.: 1603831

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/16/2016 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 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Sandstone CS
Lab ID: 1603831-001 **Matrix:** AQUEOUS

Client Sample ID: Sandstone Non Exempt
Collection Date: 3/15/2016 10:05:00 AM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP						Analyst: **DAM**	
2-Methylphenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
3+4-Methylphenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Phenol	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4-Dinitrotoluene	ND	0.25	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachlorobenzene	ND	0.25	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachlorobutadiene	ND	0.50	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Hexachloroethane	ND	3.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Nitrobenzene	ND	2.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Pentachlorophenol	ND	100	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Pyridine	ND	5.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4,5-Trichlorophenol	ND	400	D	mg/L	1	3/17/2016 8:12:20 PM	24302
2,4,6-Trichlorophenol	ND	2.0	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Cresols, Total	ND	200	D	mg/L	1	3/17/2016 8:12:20 PM	24302
Surr: 2-Fluorophenol	14.8	15-124	SD	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: Phenol-d5	16.1	15-118	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 2,4,6-Tribromophenol	42.8	15-148	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: Nitrobenzene-d5	35.2	40.6-124	SD	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 2-Fluorobiphenyl	41.0	35.7-128	D	%Rec	1	3/17/2016 8:12:20 PM	24302
Surr: 4-Terphenyl-d14	90.3	18.8-115	D	%Rec	1	3/17/2016 8:12:20 PM	24302
EPA METHOD 7470: MERCURY						Analyst: **pmf**	
Mercury	0.0014	0.00080		mg/L	1	3/18/2016 11:05:44 AM	24317
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Arsenic	ND	0.20		mg/L	1	3/21/2016 8:57:49 AM	24322
Barium	9.4	0.20		mg/L	1	3/21/2016 8:57:49 AM	24322
Cadmium	0.28	0.020		mg/L	1	3/21/2016 8:57:49 AM	24322
Chromium	0.60	0.060		mg/L	1	3/21/2016 8:57:49 AM	24322
Lead	0.97	0.050		mg/L	1	3/21/2016 8:57:49 AM	24322
Selenium	ND	0.50		mg/L	1	3/21/2016 8:57:49 AM	24322
Silver	ND	0.050		mg/L	1	3/21/2016 8:57:49 AM	24322
EPA METHOD 8260B: VOLATILES						Analyst: **AG**	
Benzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Toluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Ethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949

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
R	RPD outside accepted recovery limits	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: Souder, Miller and Associates
Project: Sandstone CS
Lab ID: 1603831-001 **Matrix:** AQUEOUS

Client Sample ID: Sandstone Non Exempt
Collection Date: 3/15/2016 10:05:00 AM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: AG	
Naphthalene	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
1-Methylnaphthalene	ND	0.80		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Methylnaphthalene	ND	0.80		mg/L	200	3/21/2016 5:55:36 PM	R32949
Acetone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromodichloromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromoform	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Bromomethane	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Butanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Carbon disulfide	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Carbon Tetrachloride	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloroethane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloroform	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Chloromethane	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Chlorotoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Chlorotoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
cis-1,2-DCE	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dibromochloromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dibromomethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloroethene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2-Dichloropropane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,3-Dichloropropane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
2,2-Dichloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Hexachlorobutadiene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
2-Hexanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Isopropylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Isopropyltoluene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/21/2016 5:55:36 PM	R32949
Methylene Chloride	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949
n-Butylbenzene	ND	0.60		mg/L	200	3/21/2016 5:55:36 PM	R32949

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
R	RPD outside accepted recovery limits	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: Souder, Miller and Associates
Project: Sandstone CS
Lab ID: 1603831-001 **Matrix:** AQUEOUS

Client Sample ID: Sandstone Non Exempt
Collection Date: 3/15/2016 10:05:00 AM
Received Date: 3/16/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **AG**	
n-Propylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
sec-Butylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Styrene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
tert-Butylbenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
trans-1,2-DCE	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Trichlorofluoromethane	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/21/2016 5:55:36 PM	R32949
Vinyl chloride	ND	0.20		mg/L	200	3/21/2016 5:55:36 PM	R32949
Xylenes, Total	ND	0.30		mg/L	200	3/21/2016 5:55:36 PM	R32949
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: Dibromofluoromethane	112	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949
Surr: Toluene-d8	104	70-130		%Rec	200	3/21/2016 5:55:36 PM	R32949

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
R	RPD outside accepted recovery limits	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#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R32949	RunNo: 32949
Prep Date:	Analysis Date: 3/21/2016	SeqNo: 1010387 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	94.7	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R32949	RunNo: 32949
Prep Date:	Analysis Date: 3/21/2016	SeqNo: 1010388 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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
R	RPD outside accepted recovery limits	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#: **1603831**

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32949**	RunNo: **32949**
Prep Date:	Analysis Date: **3/21/2016**	SeqNo: **1010388** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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
R	RPD outside accepted recovery limits	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#: **1603831**

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32949**	RunNo: **32949**
Prep Date:	Analysis Date: **3/21/2016**	SeqNo: **1010388** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	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
R	RPD outside accepted recovery limits	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#: **1603831**

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	MB-24317	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	24317	RunNo:	32894				
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008338	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24317	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	24317	RunNo:	32894				
Prep Date:	3/17/2016	Analysis Date:	3/18/2016	SeqNo:	1008339	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

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
R	RPD outside accepted recovery limits	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#: 1603831

25-Mar-16

Client: Souder, Miller and Associates

Project: Sandstone CS

Sample ID	MB-24322	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	PBW	Batch ID:	24322	RunNo:	32920				
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009590	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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LCS-24322	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	LCSW	Batch ID:	24322	RunNo:	32920				
Prep Date:	3/17/2016	Analysis Date:	3/21/2016	SeqNo:	1009591	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	96.0	80	120			
Barium	0.46	0.020	0.5000	0	92.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	93.6	80	120			
Chromium	0.46	0.0060	0.5000	0	91.5	80	120			
Lead	0.46	0.0050	0.5000	0	91.4	80	120			
Selenium	0.46	0.050	0.5000	0	91.6	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

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
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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: SMA-FARM | Work Order Number: 1603831 | RcptNo: 1

Received by/date: LM 03/16/16

Logged By: Anne Thorne 3/16/2016 7:45:00 AM Ann Thorne

Completed By: Anne Thorne 3/16/2016 Ann Thorne

Reviewed By: AT 3.16.16

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 ☐	# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? 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 ☐	Checked by: AJS

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	1.3	Good	Yes			

Chain-of-Custody Record

SMA

g Address: 401 W. Broadway
Farmington NM 8740
: #: 505 325-7535
or Fax#: ashley.maxwell@sowerswiller.com
: Package:
ndard ☐ Level 4 (Full Validation)
ditation
LAP ☐ Other
D (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Sandstone CS

Project #:

Project Manager: Tom Long / Ashley Maxwell

Sampler: Randy Watson

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.3+1.0CF=1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10:05 RW					1403831												
10:05	Soil	Sandstone Non Exempt	Various	Various	001						X	X			X		

Time:	Relinquished by:	Received by:	Date	Time
1735	Randy Watson	Ashley Walt	3/15/14	1735
1847	Ashley Walt		03/16/14	0745

Remarks: 8260 Full List: Report TCLP compounds at TCLP Limits

Invoice Enterprise c/o Tom Long/Enterprise

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.

9/6/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Lindrith Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL I Section 18 Township 24 North Range 5 West; 36.310358, -107.395766, San Juan County, NM

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 9-7-18
SIGNATURE: Electronic TELEPHONE NO.: 505-327-6974
Surface Waste Management Facility Authorized Agent

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

March 22, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Lindrith

OrderNo.: 1803649

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/13/2018 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1803649
Date Reported: 3/22/2018

CLIENT: Souder, Miller and Associates
Project: Lindrith
Lab ID: 1803649-001

Client Sample ID: Lindrith Non Exempt
Collection Date: 3/12/2018 11:52:00 AM
Matrix: AQUEOUS
Received Date: 3/13/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: **rde**
Mercury	ND	1.0		mg/L	5	3/19/2018 5:21:12 PM	37099
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: **JLF**
Arsenic	ND	5.0		mg/L	1	3/21/2018 4:12:05 PM	37055
Barium	ND	100		mg/L	1	3/21/2018 3:20:14 PM	37055
Cadmium	ND	1.0		mg/L	1	3/21/2018 3:20:14 PM	37055
Chromium	ND	5.0		mg/L	1	3/21/2018 3:20:14 PM	37055
Lead	ND	5.0		mg/L	1	3/21/2018 3:20:14 PM	37055
Selenium	ND	1.0		mg/L	1	3/21/2018 3:20:14 PM	37055
Silver	ND	5.0		mg/L	1	3/21/2018 3:20:14 PM	37055
EPA METHOD 8270C: PAHS							Analyst: **DAM**
Naphthalene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
1-Methylnaphthalene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
2-Methylnaphthalene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Acenaphthylene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Acenaphthene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Fluorene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Phenanthrene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Anthracene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Fluoranthene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Pyrene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Benz(a)anthracene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Chrysene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Benzo(b)fluoranthene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Benzo(k)fluoranthene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Benzo(a)pyrene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Dibenz(a,h)anthracene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Benzo(g,h,i)perylene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Indeno(1,2,3-cd)pyrene	ND	50	D	µg/L	1	3/15/2018 7:18:20 PM	36978
Surr: N-hexadecane	0	18.7-145	SD	%Rec	1	3/15/2018 7:18:20 PM	36978
Surr: Benzo(e)pyrene	0	28.2-137	SD	%Rec	1	3/15/2018 7:18:20 PM	36978
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**
Benzene	1.5	0.50		µg/L	200	3/13/2018 6:00:00 PM	R49738
Toluene	2.4	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Ethylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Methyl tert-butyl ether (MTBE)	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2,4-Trimethylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,3,5-Trimethylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2-Dichloroethane (EDC)	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738

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
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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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.

Analytical Report
Lab Order 1803649
Date Reported: 3/22/2018

CLIENT: Souder, Miller and Associates
Project: Lindrith
Lab ID: 1803649-001

Client Sample ID: Lindrith Non Exempt
Collection Date: 3/12/2018 11:52:00 AM
Matrix: AQUEOUS **Received Date:** 3/13/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**
1,2-Dibromoethane (EDB)	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Naphthalene	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
1-Methylnaphthalene	ND	0.80		µg/L	200	3/13/2018 6:00:00 PM	R49738
2-Methylnaphthalene	ND	0.80		µg/L	200	3/13/2018 6:00:00 PM	R49738
Acetone	2.0	2.0		µg/L	200	3/13/2018 6:00:00 PM	R49738
Bromobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Bromodichloromethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Bromoform	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Bromomethane	ND	0.60		µg/L	200	3/13/2018 6:00:00 PM	R49738
2-Butanone	ND	2.0		µg/L	200	3/13/2018 6:00:00 PM	R49738
Carbon disulfide	ND	2.0		µg/L	200	3/13/2018 6:00:00 PM	R49738
Carbon Tetrachloride	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Chlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Chloroethane	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
Chloroform	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Chloromethane	ND	0.60		µg/L	200	3/13/2018 6:00:00 PM	R49738
2-Chlorotoluene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
4-Chlorotoluene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
cis-1,2-DCE	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
cis-1,3-Dichloropropene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2-Dibromo-3-chloropropane	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
Dibromochloromethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Dibromomethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2-Dichlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,3-Dichlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,4-Dichlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Dichlorodifluoromethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1-Dichloroethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1-Dichloroethene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2-Dichloropropane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,3-Dichloropropane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
2,2-Dichloropropane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1-Dichloropropene	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
Hexachlorobutadiene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
2-Hexanone	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Isopropylbenzene	ND	2.0		µg/L	200	3/13/2018 6:00:00 PM	R49738
4-Isopropyltoluene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
4-Methyl-2-pentanone	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Methylene Chloride	ND	2.0		µg/L	200	3/13/2018 6:00:00 PM	R49738

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
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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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1803649
Date Reported: 3/22/2018

CLIENT: Souder, Miller and Associates
Project: Lindrith
Lab ID: 1803649-001
Matrix: AQUEOUS
Client Sample ID: Lindrith Non Exempt
Collection Date: 3/12/2018 11:52:00 AM
Received Date: 3/13/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		µg/L	200	3/13/2018 6:00:00 PM	R49738
n-Propylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
sec-Butylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Styrene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
tert-Butylbenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1,1,2-Tetrachloroethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1,2,2-Tetrachloroethane	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
Tetrachloroethene (PCE)	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
trans-1,2-DCE	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
trans-1,3-Dichloropropene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2,3-Trichlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2,4-Trichlorobenzene	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1,1-Trichloroethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,1,2-Trichloroethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Trichloroethene (TCE)	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Trichlorofluoromethane	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
1,2,3-Trichloropropane	ND	0.40		µg/L	200	3/13/2018 6:00:00 PM	R49738
Vinyl chloride	ND	0.20		µg/L	200	3/13/2018 6:00:00 PM	R49738
Xylenes, Total	1.0	0.30		µg/L	200	3/13/2018 6:00:00 PM	R49738
Surr: 1,2-Dichloroethane-d4	84.9	70-130		%Rec	200	3/13/2018 6:00:00 PM	R49738
Surr: 4-Bromofluorobenzene	80.8	70-130		%Rec	200	3/13/2018 6:00:00 PM	R49738
Surr: Dibromofluoromethane	92.3	70-130		%Rec	200	3/13/2018 6:00:00 PM	R49738
Surr: Toluene-d8	85.9	70-130		%Rec	200	3/13/2018 6:00:00 PM	R49738

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

1803649-001D LINDRITH NON EXEMPT
Collected date/time: 03/12/18 11:52

SAMPLE RESULTS - 01
L977214

ONE LAB. NATIONWIDE

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	0.0170		0.00500	1	03/15/2018 16:10	WG1084222

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.24	T8	1	03/15/2018 07:47	WG1084789

Sample Narrative:
L977214-01 WG1084789: 6.24 at 11.5C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	03/18/2018 14:03	WG1085065

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	03/18/2018 12:00	WG1086170

WG1084222

Wet Chemistry by Method 4500 CN E-2011

QUALITY CONTROL SUMMARY

L977214-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3293621-1 03/15/18 15:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3293621-2 03/15/18 15:32 - (LCSD) R3293621-3 03/15/18 15:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Reactive Cyanide	0.100	0.0945	0.0926	94.5	92.6	85.0-115			2.03	20

L977222-01 Original Sample (OS) • Duplicate (DUP)

(OS) L977222-01 03/15/18 07:47 • (DUP) R3293353-4 03/15/18 07:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	9.58	9.56	1	0.209		1

Sample Narrative:
OS: 9.58 at 12.3C
DUP: 9.56 at 12.3C

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3293353-1 03/15/18 07:47 • (LCSD) R3293353-2 03/15/18 07:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
Corrosivity by pH	10.0	9.99	9.98	99.9	99.8	99.0-101			0.100	1

Sample Narrative:
LCS: 9.99 at 20.1C
LCSD: 9.98 at 20.1C

Method Blank (MB)

(MB) R3294165-1 03/18/18 13:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/
Reactive Sulfide	U		0.0065C	0.0500

L977549-01 Original Sample (OS) • Duplicate (DUP)

(OS) L977549-01 03/18/18 14:03 • (DUP) R3294165-4 03/18/18 14:03

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulfide	ND	0.00700	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3294165-2 03/18/18 13:55 • (LCSD) R3294165-3 03/18/18 13:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive Sulfide	0.500	0.483	0.489	96.6	97.8	85.0-115			1.23	20

L977214-01 Original Sample (OS) • Duplicate (DUP)

(OS) L977214-01 03/18/18 12:00 • (DUP) R3294141-3 03/18/18 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3294141-1 03/18/18 12:00 • (LCSD) R3294141-2 03/18/18 12:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	deg F	deg F	deg F	%	%	%			%	%
Flashpoint	82.0	82.7	82.7	101	101	96.0-104			0.000	10

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit
ND	Not detected at the Reporting Limit (or MDL where applicable)
RDL	Reported Detection Limit
Rec.	Recovery
RPD	Relative Percent Difference
SDG	Sample Delivery Group
U	Not detected at the Reporting Limit (or MDL where applicable)
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are seperated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803649

22-Mar-18

Client: Souder, Miller and Associates

Project: Lindrith

Sample ID 100ng lcs3	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R49738	RunNo: 49738
Prep Date:	Analysis Date: 3/13/2018	SeqNo: 1609892 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	98.5	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	120	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.6	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		81.1	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	8.4		10.00		84.0	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R49738	RunNo: 49738
Prep Date:	Analysis Date: 3/13/2018	SeqNo: 1609894 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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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#: 1803649

22-Mar-18

Client: Souder, Miller and Associates
Project: Lindrith

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R49738	RunNo: 49738							
Prep Date:	Analysis Date: 3/13/2018	SeqNo: 1609894	Units: µg/L						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1803649

22-Mar-18

Client: Souder, Miller and Associates

Project: Lindrith

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R49738	RunNo: 49738						
Prep Date:	Analysis Date: 3/13/2018	SeqNo: 1609894	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.3	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.8	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	8.6		10.00		85.5	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
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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#: 1803649

22-Mar-18

Client: Souder, Miller and Associates
Project: Lindrith

Sample ID lcs-36978	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614453 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	90.0	28.6	113			
1-Methylnaphthalene	19	0.50	20.00	0	95.3	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	90.0	26.3	112			
Acenaphthylene	18	0.50	20.00	0	87.7	36.2	114			
Acenaphthene	18	0.50	20.00	0	89.2	35.6	116			
Fluorene	19	0.50	20.00	0	95.4	38.4	116			
Phenanthrene	20	0.50	20.00	0	97.9	42.3	118			
Anthracene	20	0.50	20.00	0	98.1	42.2	117			
Fluoranthene	21	0.50	20.00	0	106	42.5	118			
Pyrene	21	0.50	20.00	0	104	40.8	121			
Benz(a)anthracene	20	0.50	20.00	0	98.7	43	118			
Chrysene	12	0.50	20.00	0	59.2	39.4	119			
Benzo(b)fluoranthene	21	0.50	20.00	0	104	47.8	115			
Benzo(k)fluoranthene	20	0.50	20.00	0	98.2	40.5	120			
Benzo(a)pyrene	19	0.50	20.00	0	97.1	41.5	115			
Dibenz(a,h)anthracene	19	0.50	20.00	0	93.5	48.6	115			
Benzo(g,h,i)perylene	21	0.50	20.00	0	106	42	119			
Indeno(1,2,3-cd)pyrene	21	0.50	20.00	0	103	42.9	118			
Surr: N-hexadecane	69		87.60		78.9	18.7	145			
Surr: Benzo(e)pyrene	19		20.00		93.7	28.2	137			

Sample ID lcsd-36978	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614454 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	10	0.50	20.00	0	50.5	28.6	113	56.2	40.7	R
1-Methylnaphthalene	10	0.50	20.00	0	51.4	27	113	59.9	38.4	R
2-Methylnaphthalene	9.9	0.50	20.00	0	49.7	26.3	112	57.7	25.5	R
Acenaphthylene	11	0.50	20.00	0	56.5	36.2	114	43.3	34.1	R
Acenaphthene	11	0.50	20.00	0	56.8	35.6	116	44.4	32.1	R
Fluorene	12	0.50	20.00	0	60.1	38.4	116	45.4	28	R
Phenanthrene	13	0.50	20.00	0	64.3	42.3	118	41.4	37.4	R
Anthracene	13	0.50	20.00	0	66.2	42.2	117	38.8	36.2	R
Fluoranthene	14	0.50	20.00	0	68.9	42.5	118	42.8	26.6	R
Pyrene	13	0.50	20.00	0	64.4	40.8	121	46.8	26.8	R
Benz(a)anthracene	13	0.50	20.00	0	65.7	43	118	40.1	25.1	R
Chrysene	13	0.50	20.00	0	63.9	39.4	119	7.64	23.3	
Benzo(b)fluoranthene	14	0.50	20.00	0	68.4	47.8	115	41.5	22.5	R

Qualifiers:

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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#: 1803649

22-Mar-18

Client: Souder, Miller and Associates

Project: Lindrith

Sample ID lcsd-36978	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614454 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	14	0.50	20.00	0	69.7	40.5	120	33.9	30.9	R
Benzo(a)pyrene	13	0.50	20.00	0	63.9	41.5	115	41.2	23.2	R
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.2	48.6	115	31.3	26.5	R
Benzo(g,h,i)perylene	14	0.50	20.00	0	68.1	42	119	43.3	30.7	R
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	68.6	42.9	118	40.0	25.4	R
Surr: N-hexadecane	32		87.60		36.8	18.7	145	0	0	
Surr: Benzo(e)pyrene	18		20.00		87.9	28.2	137	0	0	

Sample ID mb-36978	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614455 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	56		87.60		63.4	18.7	145			
Surr: Benzo(e)pyrene	15		20.00		75.6	28.2	137			

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#: 1803649

22-Mar-18

Client: Souder, Miller and Associates

Project: Lindrith

Sample ID	MB-37099	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	37099	RunNo:	49907					
Prep Date:	3/19/2018	Analysis Date:	3/19/2018	SeqNo:	1615564	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-37099	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	37099	RunNo:	49907					
Prep Date:	3/19/2018	Analysis Date:	3/19/2018	SeqNo:	1615579	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	91.3	80	120			

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: SMA-FARM | Work Order Number: 1803649 | RcptNo: 1

Received By: Anne Thorne 3/13/2018 6.55:00 AM Anne Thorne

Completed By: Anne Thorne 3/13/2018 7:57:55 AM Anne Thorne

Reviewed By: SRC 03/13/18

Labeled By DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

of preserved bottles checked for pH: 1,3 (<2 or >12 unless noted)
Adjusted? YES
Checked by: PDS

Special Handling (if applicable)

15. 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:

16. Additional remarks: For metals analysis: Added approx. 3.0 mL HNO_3 and held for 24 hrs prior to analysis. 3/13/18 @ 0830 PDS

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway Farmington, NM 87401

Phone #: 505-325-7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush ASAP

Project Name: Lindrith

Project #: Lindrith Non Exempt

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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. 1803649	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles (Y or N)
3-12-18	11:52	Aqueous	Lindrith Non Exempt	various	various	-001						X	X			X		X					

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/12/18	1551		Mustafa Wheeler	3/12/18	1551
3/12/18	1813	Mustafa Wheeler		03/13/18	0855

Remarks: 8260 Full List
Run TCLP compound at TCLP Limit
Invoice Enterprise CC Tom Long

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.

9/10/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Edgewood Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL D Section 3 Township 10 North Range 7 East; 35.127338, -106.190538

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorize Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____Agua Moss, LLC_____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 9-19-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 309-6974
Surface Waste Management Facility Authorized Agent

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

September 07, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Edgewood

OrderNo.: 1808E45

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/23/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1808E45
Date Reported: 9/7/2018

CLIENT: Souder, Miller and Associates
Project: Edgewood
Lab ID: 1808E45-001 **Matrix:** AQUEOUS

Client Sample ID: Edgewood
Collection Date: 8/21/2018 9:24:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.20		mg/L	1	8/29/2018 12:49:35 PM	40028
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **pmf**	
Arsenic	ND	5.0		mg/L	1	8/30/2018 1:42:09 PM	40021
Barium	ND	100		mg/L	1	8/29/2018 7:26:18 PM	40021
Cadmium	ND	1.0		mg/L	1	8/29/2018 7:26:18 PM	40021
Chromium	ND	5.0		mg/L	1	8/29/2018 7:26:18 PM	40021
Lead	ND	5.0		mg/L	1	8/30/2018 1:42:09 PM	40021
Selenium	ND	1.0		mg/L	1	8/29/2018 7:26:18 PM	40021
Silver	ND	5.0		mg/L	1	8/29/2018 7:26:18 PM	40021
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
1-Methylnaphthalene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
2-Methylnaphthalene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Acenaphthylene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Acenaphthene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Fluorene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Phenanthrene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Anthracene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Fluoranthene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Pyrene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Benz(a)anthracene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Chrysene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Benzo(b)fluoranthene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Benzo(k)fluoranthene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Benzo(a)pyrene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	8/30/2018 7:07:03 PM	40026
Surr: N-hexadecane	0	35.2-113	SD	%Rec	10	8/30/2018 7:07:03 PM	40026
Surr: Benzo(e)pyrene	0	48.3-123	SD	%Rec	10	8/30/2018 7:07:03 PM	40026
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		mg/L	200	8/23/2018 7:27:00 PM	R53659
Toluene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Ethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659

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: Souder, Miller and Associates
Project: Edgewood
Lab ID: 1808E45-001
Matrix: AQUEOUS
Client Sample ID: Edgewood
Collection Date: 8/21/2018 9:24:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Naphthalene	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
1-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 7:27:00 PM	R53659
2-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 7:27:00 PM	R53659
Acetone	ND	2.0		mg/L	200	8/23/2018 7:27:00 PM	R53659
Bromobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Bromodichloromethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Bromoform	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Bromomethane	ND	0.60		mg/L	200	8/23/2018 7:27:00 PM	R53659
2-Butanone	ND	2.0		mg/L	200	8/23/2018 7:27:00 PM	R53659
Carbon disulfide	ND	2.0		mg/L	200	8/23/2018 7:27:00 PM	R53659
Carbon Tetrachloride	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Chlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Chloroethane	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
Chloroform	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Chloromethane	ND	0.60		mg/L	200	8/23/2018 7:27:00 PM	R53659
2-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
4-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
cis-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
Dibromochloromethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Dibromomethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,3-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,4-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Dichlorodifluoromethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1-Dichloroethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1-Dichloroethene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,3-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
2,2-Dichloropropane	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Hexachlorobutadiene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
2-Hexanone	ND	2.0		mg/L	200	8/23/2018 7:27:00 PM	R53659
Isopropylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
4-Isopropyltoluene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
4-Methyl-2-pentanone	ND	2.0		mg/L	200	8/23/2018 7:27:00 PM	R53659
Methylene Chloride	ND	0.60		mg/L	200	8/23/2018 7:27:00 PM	R53659

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Edgewood
Lab ID: 1808E45-001
Matrix: AQUEOUS
Client Sample ID: Edgewood
Collection Date: 8/21/2018 9:24:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: RAA	
n-Butylbenzene	ND	0.60		mg/L	200	8/23/2018 7:27:00 PM	R53659
n-Propylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
sec-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Styrene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
tert-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
trans-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1,1-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,1,2-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Trichloroethene (TCE)	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Trichlorofluoromethane	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
1,2,3-Trichloropropane	ND	0.40		mg/L	200	8/23/2018 7:27:00 PM	R53659
Vinyl chloride	ND	0.20		mg/L	200	8/23/2018 7:27:00 PM	R53659
Xylenes, Total	ND	0.30		mg/L	200	8/23/2018 7:27:00 PM	R53659
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	200	8/23/2018 7:27:00 PM	R53659
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	8/23/2018 7:27:00 PM	R53659
Surr: Dibromofluoromethane	102	70-130		%Rec	200	8/23/2018 7:27:00 PM	R53659
Surr: Toluene-d8	95.7	70-130		%Rec	200	8/23/2018 7:27:00 PM	R53659

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180828021
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1808E45
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180828021-001	**Sampling Date**	8/21/2018	**Date/Time Received**	8/28/2018 11:02 AM
Client Sample ID	1808E45-001D / EDGEWOOD	**Sampling Time**	9:24 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	8/30/2018 12:15:00 PM	RPU	SW846 CH7	
Flashpoint	>200	°F		8/30/2018 3:00:00 PM	GPB	EPA 1010	
pH	6.92	ph Units		8/29/2018 9:15:00 AM	LAC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	0.2	9/6/2018 3:15:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180828021
Project Name: 1808E45

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	70-130	9/6/2018	9/6/2018
Cyanide (reactive)	0.526	mg/L	0.5	105.2	80-120	8/29/2018	8/30/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180828017-001	Reactive sulfide	ND	0.354	mg/L	0.393	90.1	70-130	9/6/2018	9/6/2018
180828017-001	Cyanide (reactive)	ND	5.12	mg/L	5	102.4	80-120	8/29/2018	8/30/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.16	mg/L	5	103.2	0.8	0-25	8/29/2018	8/30/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	8/29/2018	8/30/2018
Reactive sulfide	ND	mg/L	0.1	9/6/2018	9/6/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770659 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	92.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R53659	RunNo: 53659							
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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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#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID lcs-40026	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776476 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0	83.8	28.6	113			
1-Methylnaphthalene	20	0.50	20.00	0	98.2	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	88.1	26.3	112			
Acenaphthylene	18	0.50	20.00	0	91.3	36.2	114			
Acenaphthene	17	0.50	20.00	0	84.2	35.6	116			
Fluorene	18	0.50	20.00	0	90.5	38.4	116			
Phenanthrene	19	0.50	20.00	0	93.2	42.3	118			
Anthracene	18	0.50	20.00	0	91.1	42.2	117			
Fluoranthene	19	0.50	20.00	0	94.7	42.5	118			
Pyrene	20	0.50	20.00	0	98.7	40.8	121			
Benz(a)anthracene	19	0.50	20.00	0	95.4	43	118			
Chrysene	18	0.50	20.00	0	90.4	39.4	119			
Benzo(b)fluoranthene	19	0.50	20.00	0	95.9	47.8	115			
Benzo(k)fluoranthene	21	0.50	20.00	0	106	40.5	120			
Benzo(a)pyrene	18	0.50	20.00	0	90.2	41.5	115			
Dibenz(a,h)anthracene	16	0.50	20.00	0	79.8	48.6	115			
Benzo(g,h,i)perylene	17	0.50	20.00	0	84.5	42	119			
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.4	42.9	118			
Surr: N-hexadecane	91		87.60		104	35.2	113			
Surr: Benzo(e)pyrene	23		20.00		114	48.3	123			

Sample ID lcsd-40026	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776477 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	68.0	28.6	113	20.8	40.7	
1-Methylnaphthalene	16	0.50	20.00	0	80.3	27	113	20.1	38.4	
2-Methylnaphthalene	14	0.50	20.00	0	72.0	26.3	112	20.1	25.5	
Acenaphthylene	15	0.50	20.00	0	75.6	36.2	114	18.8	34.1	
Acenaphthene	15	0.50	20.00	0	76.4	35.6	116	9.71	32.1	
Fluorene	16	0.50	20.00	0	80.8	38.4	116	11.3	28	
Phenanthrene	16	0.50	20.00	0	78.3	42.3	118	17.4	37.4	
Anthracene	16	0.50	20.00	0	80.3	42.2	117	12.6	36.2	
Fluoranthene	16	0.50	20.00	0	82.2	42.5	118	14.1	26.6	
Pyrene	18	0.50	20.00	0	88.9	40.8	121	10.4	26.8	
Benz(a)anthracene	17	0.50	20.00	0	84.7	43	118	11.9	25.1	
Chrysene	17	0.50	20.00	0	82.6	39.4	119	9.02	23.3	
Benzo(b)fluoranthene	18	0.50	20.00	0	88.0	47.8	115	8.59	22.5	

Qualifiers:

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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#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID lcsd-40026	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 40026	RunNo: 53825							
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776477	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	91.5	40.5	120	14.4	30.9	
Benzo(a)pyrene	16	0.50	20.00	0	81.0	41.5	115	10.7	23.2	
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.9	48.6	115	14.7	26.5	
Benzo(g,h,i)perylene	15	0.50	20.00	0	75.4	42	119	11.4	30.7	
Indeno(1,2,3-cd)pyrene	17	0.50	20.00	0	87.2	42.9	118	12.1	25.4	
Surr: N-hexadecane	76		87.60		86.2	35.2	113	0	0	
Surr: Benzo(e)pyrene	19		20.00		93.6	48.3	123	0	0	

Sample ID mb-40026	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 40026	RunNo: 53825							
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776478	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	77		87.60		87.8	35.2	113			
Surr: Benzo(e)pyrene	18		20.00		90.0	48.3	123			

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#: **1808E45**

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID	MB-40028	SampType:	MBLK		TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	40028		RunNo:	53784				
Prep Date:	8/28/2018	Analysis Date:	8/29/2018		SeqNo:	1775035	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-40028	SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	40028		RunNo:	53784				
Prep Date:	8/28/2018	Analysis Date:	8/29/2018		SeqNo:	1775036	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

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#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775201 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								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775203 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.4	80	120			
Barium	0.50	0.020	0.5000	0	100	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.48	0.0060	0.5000	0	95.4	80	120			
Silver	0.10	0.0050	0.1000	0	104	80	120			

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775493 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775495 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.020	0.5000	0	106	80	120			
Cadmium	0.53	0.0020	0.5000	0	106	80	120			
Chromium	0.50	0.0060	0.5000	0	99.2	80	120			
Selenium	0.48	0.050	0.5000	0	95.0	80	120			
Silver	0.11	0.0050	0.1000	0	112	80	120			

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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E45

07-Sep-18

Client: Souder, Miller and Associates

Project: Edgewood

Sample ID	MB-40021	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	40021	RunNo:	53804					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775530	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Lead	ND	0.0050								

Sample ID	LCS-40021	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	40021	RunNo:	53804					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775532	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			

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: SMA-FARM Work Order Number: 1808E45 RcptNo: 1

JAB 08/24/18

Received By: Anne Thorne 8/23/2018 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 8/23/2018 9:28:01 AM Anne Thorne

Reviewed By: JAB 08/24/18

Labeled by: JO 8/23/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1 2 (<2 or >12 unless noted)

Adjusted? NO

Checked by: JO 8/23/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 N Broadway
Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
Edgewood

Project #:

Project Manager:
Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No 2 coolers

Sample Temperature: 3.3 - 0.3 = 3.0 2.0 - 0.3 = 1.7

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.
8/21/18	9:24	Aqueous	~~Various~~ Edgewood	Various	Various	201

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
					X	X			X			X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	1605			8/22/18	1605
8/22/18	1837			8/22/18	0700

Remarks: 8260 Full List
Report TCLP compound at TCLP Limits
CC Tom Long Invoice Enterprise

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.

9/10/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Duran Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL M Section 1 Township 2North Range 16 East; 34.422612, -105.224238

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorizes Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 9-17-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 307-6974
Surface Waste Management Facility Authorized Agent

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

September 07, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Duran

OrderNo.: 1808E43

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/23/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1808E43
Date Reported: 9/7/2018

CLIENT: Souder, Miller and Associates
Project: Duran
Lab ID: 1808E43-001 **Matrix:** AQUEOUS

Client Sample ID: Duran
Collection Date: 8/21/2018 1:58:00 PM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.20		mg/L	1	8/29/2018 12:47:21 PM	40028
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **pmf**	
Arsenic	ND	5.0		mg/L	1	8/30/2018 1:40:36 PM	40021
Barium	ND	100		mg/L	1	8/29/2018 7:17:39 PM	40021
Cadmium	ND	1.0		mg/L	1	8/29/2018 7:17:39 PM	40021
Chromium	ND	5.0		mg/L	1	8/29/2018 7:17:39 PM	40021
Lead	ND	5.0		mg/L	1	8/30/2018 1:40:36 PM	40021
Selenium	ND	1.0		mg/L	1	8/29/2018 7:17:39 PM	40021
Silver	ND	5.0		mg/L	1	8/29/2018 7:17:39 PM	40021
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
1-Methylnaphthalene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
2-Methylnaphthalene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Acenaphthylene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Acenaphthene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Fluorene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Phenanthrene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Anthracene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Fluoranthene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Pyrene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Benz(a)anthracene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Chrysene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Benzo(b)fluoranthene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Benzo(k)fluoranthene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Benzo(a)pyrene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	10	8/30/2018 6:42:50 PM	40026
Surr: N-hexadecane	0	35.2-113	SD	%Rec	10	8/30/2018 6:42:50 PM	40026
Surr: Benzo(e)pyrene	0	48.3-123	SD	%Rec	10	8/30/2018 6:42:50 PM	40026
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		mg/L	200	8/23/2018 7:03:00 PM	R53659
Toluene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Ethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659

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: Souder, Miller and Associates
Project: Duran
Lab ID: 1808E43-001
Matrix: AQUEOUS
Client Sample ID: Duran
Collection Date: 8/21/2018 1:58:00 PM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**RAA**
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Naphthalene	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
1-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 7:03:00 PM	R53659
2-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 7:03:00 PM	R53659
Acetone	ND	2.0		mg/L	200	8/23/2018 7:03:00 PM	R53659
Bromobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Bromodichloromethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Bromoform	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Bromomethane	ND	0.60		mg/L	200	8/23/2018 7:03:00 PM	R53659
2-Butanone	ND	2.0		mg/L	200	8/23/2018 7:03:00 PM	R53659
Carbon disulfide	ND	2.0		mg/L	200	8/23/2018 7:03:00 PM	R53659
Carbon Tetrachloride	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Chlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Chloroethane	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
Chloroform	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Chloromethane	ND	0.60		mg/L	200	8/23/2018 7:03:00 PM	R53659
2-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
4-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
cis-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
Dibromochloromethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Dibromomethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,3-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,4-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Dichlorodifluoromethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1-Dichloroethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1-Dichloroethene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,3-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
2,2-Dichloropropane	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Hexachlorobutadiene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
2-Hexanone	ND	2.0		mg/L	200	8/23/2018 7:03:00 PM	R53659
Isopropylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
4-Isopropyltoluene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
4-Methyl-2-pentanone	ND	2.0		mg/L	200	8/23/2018 7:03:00 PM	R53659
Methylene Chloride	ND	0.60		mg/L	200	8/23/2018 7:03:00 PM	R53659

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: Souder, Miller and Associates
Project: Duran
Lab ID: 1808E43-001 **Matrix:** AQUEOUS

Client Sample ID: Duran
Collection Date: 8/21/2018 1:58:00 PM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: RAA	
n-Butylbenzene	ND	0.60		mg/L	200	8/23/2018 7:03:00 PM	R53659
n-Propylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
sec-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Styrene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
tert-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
trans-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1,1-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,1,2-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Trichloroethene (TCE)	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Trichlorofluoromethane	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
1,2,3-Trichloropropane	ND	0.40		mg/L	200	8/23/2018 7:03:00 PM	R53659
Vinyl chloride	ND	0.20		mg/L	200	8/23/2018 7:03:00 PM	R53659
Xylenes, Total	ND	0.30		mg/L	200	8/23/2018 7:03:00 PM	R53659
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	200	8/23/2018 7:03:00 PM	R53659
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	200	8/23/2018 7:03:00 PM	R53659
Surr: Dibromofluoromethane	105	70-130		%Rec	200	8/23/2018 7:03:00 PM	R53659
Surr: Toluene-d8	95.5	70-130		%Rec	200	8/23/2018 7:03:00 PM	R53659

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180828019
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1808E43
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180828018-001	**Sampling Date**	8/21/2018	**Date/Time Received**	8/28/2018 11:01 AM
Client Sample ID	1808E43-001D / DURAN	**Sampling Time**	1:58 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	8/30/2018 12:15:00 PM	RPU	SW846 CH7	
Flashpoint	>200	°F		8/30/2018 2:00:00 PM	GPB	EPA 1010	
pH	6.78	ph Units		8/29/2018 9:15:00 AM	LAC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	0.19	9/6/2018 3:15:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180828019
Project Name: 1808E43

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	70-130	9/6/2018	9/6/2018
Cyanide (reactive)	0.526	mg/L	0.5	105.2	80-120	8/29/2018	8/30/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180828017-001	Reactive sulfide	ND	0.354	mg/L	0.393	90.1	70-130	9/6/2018	9/6/2018
180828017-001	Cyanide (reactive)	ND	5.12	mg/L	5	102.4	80-120	8/29/2018	8/30/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.16	mg/L	5	103.2	0.8	0-25	8/29/2018	8/30/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	8/29/2018	8/30/2018
Reactive sulfide	ND	mg/L	0.1	9/6/2018	9/6/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0026; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770659 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	92.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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#: **1808E43**

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53659**	RunNo: **53659**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	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#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID: lcs-40026	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776476 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0	83.8	28.6	113			
1-Methylnaphthalene	20	0.50	20.00	0	98.2	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	88.1	26.3	112			
Acenaphthylene	18	0.50	20.00	0	91.3	36.2	114			
Acenaphthene	17	0.50	20.00	0	84.2	35.6	116			
Fluorene	18	0.50	20.00	0	90.5	38.4	116			
Phenanthrene	19	0.50	20.00	0	93.2	42.3	118			
Anthracene	18	0.50	20.00	0	91.1	42.2	117			
Fluoranthene	19	0.50	20.00	0	94.7	42.5	118			
Pyrene	20	0.50	20.00	0	98.7	40.8	121			
Benz(a)anthracene	19	0.50	20.00	0	95.4	43	118			
Chrysene	18	0.50	20.00	0	90.4	39.4	119			
Benzo(b)fluoranthene	19	0.50	20.00	0	95.9	47.8	115			
Benzo(k)fluoranthene	21	0.50	20.00	0	106	40.5	120			
Benzo(a)pyrene	18	0.50	20.00	0	90.2	41.5	115			
Dibenz(a,h)anthracene	16	0.50	20.00	0	79.8	48.6	115			
Benzo(g,h,i)perylene	17	0.50	20.00	0	84.5	42	119			
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.4	42.9	118			
Surr: N-hexadecane	91		87.60		104	35.2	113			
Surr: Benzo(e)pyrene	23		20.00		114	48.3	123			

Sample ID: lcsd-40026	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776477 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	68.0	28.6	113	20.8	40.7	
1-Methylnaphthalene	16	0.50	20.00	0	80.3	27	113	20.1	38.4	
2-Methylnaphthalene	14	0.50	20.00	0	72.0	26.3	112	20.1	25.5	
Acenaphthylene	15	0.50	20.00	0	75.6	36.2	114	18.8	34.1	
Acenaphthene	15	0.50	20.00	0	76.4	35.6	116	9.71	32.1	
Fluorene	16	0.50	20.00	0	80.8	38.4	116	11.3	28	
Phenanthrene	16	0.50	20.00	0	78.3	42.3	118	17.4	37.4	
Anthracene	16	0.50	20.00	0	80.3	42.2	117	12.6	36.2	
Fluoranthene	16	0.50	20.00	0	82.2	42.5	118	14.1	26.6	
Pyrene	18	0.50	20.00	0	88.9	40.8	121	10.4	26.8	
Benz(a)anthracene	17	0.50	20.00	0	84.7	43	118	11.9	25.1	
Chrysene	17	0.50	20.00	0	82.6	39.4	119	9.02	23.3	
Benzo(b)fluoranthene	18	0.50	20.00	0	88.0	47.8	115	8.59	22.5	

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#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID lcsd-40026	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 40026	RunNo: 53825							
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776477	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	91.5	40.5	120	14.4	30.9	
Benzo(a)pyrene	16	0.50	20.00	0	81.0	41.5	115	10.7	23.2	
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.9	48.6	115	14.7	26.5	
Benzo(g,h,i)perylene	15	0.50	20.00	0	75.4	42	119	11.4	30.7	
Indeno(1,2,3-cd)pyrene	17	0.50	20.00	0	87.2	42.9	118	12.1	25.4	
Surr: N-hexadecane	76		87.60		86.2	35.2	113	0	0	
Surr: Benzo(e)pyrene	19		20.00		93.6	48.3	123	0	0	

Sample ID mb-40026	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 40026	RunNo: 53825							
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776478	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	77		87.60		87.8	35.2	113			
Surr: Benzo(e)pyrene	18		20.00		90.0	48.3	123			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID	MB-40028	SampType:	MBLK		TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	40028		RunNo:	53784				
Prep Date:	8/28/2018	Analysis Date:	8/29/2018		SeqNo:	1775035	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-40028	SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	40028		RunNo:	53784				
Prep Date:	8/28/2018	Analysis Date:	8/29/2018		SeqNo:	1775036	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

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#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775201 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								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775203 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.4	80	120			
Barium	0.50	0.020	0.5000	0	100	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.48	0.0060	0.5000	0	95.4	80	120			
Silver	0.10	0.0050	0.1000	0	104	80	120			

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775493 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775495 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.020	0.5000	0	106	80	120			
Cadmium	0.53	0.0020	0.5000	0	106	80	120			
Chromium	0.50	0.0060	0.5000	0	99.2	80	120			
Selenium	0.48	0.050	0.5000	0	95.0	80	120			
Silver	0.11	0.0050	0.1000	0	112	80	120			

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#: 1808E43

07-Sep-18

Client: Souder, Miller and Associates

Project: Duran

Sample ID	MB-40021	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	40021	RunNo:	53804					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775530	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Lead	ND	0.0050								

Sample ID	LCS-40021	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	40021	RunNo:	53804					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775532	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			

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

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Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM | Work Order Number: 1808E43 | RcptNo: 1

Received By: Anne Thorne 8/23/2018 7:00:00 AM

Completed By: Anne Thorne 8/23/2018 9:19:34 AM

Reviewed By: JAB 08/24/18

Labeled by: IO 8/23/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1 2 (<2 or >12 unless noted)

Adjusted? NO

Checked by: IO 8/23/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Duran

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No 2 bags

Sample Temperature: 3.3 - 2.0 - 2.3 - 2.0 - 1.8 - 1.0

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. 1808E43	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	QCI				Air Bubbles (Y or N)
8/21/18	1350	Aqueous	~~Various~~ Duran	Various	Various	001						X	X			X		X				

Date: 8/22/18 Time: 1605 Relinquished by: [signature]

Received by: [signature] Date 8/22/18 Time 1605

Date: 8/22/18 Time: 1837 Relinquished by: Chris Walls

Received by: [signature] Date 08/23/18 Time 0700

Remarks: 8260 Full List
Report TCLP compound at TCLP limits
cc Tom Long Invoice Enterprise

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.

9/10/18

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Estancia Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL I Section 27 Township 8 North Range 10 East; 34.889115, -105.857411

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorizes Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 9-19-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 307-6974
Surface Waste Management Facility Authorized Agent

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

September 07, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Estancia

OrderNo.: 1808E40

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/23/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1808E40**
Date Reported: **9/7/2018**

CLIENT: Souder, Miller and Associates
Project: Estancia
Lab ID: 1808E40-001 **Matrix:** AQUEOUS

Client Sample ID: Estancia
Collection Date: 8/21/2018 11:06:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.20		mg/L	1	8/29/2018 12:45:08 PM	40028
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **pmf**	
Arsenic	ND	5.0		mg/L	1	8/30/2018 1:35:51 PM	40021
Barium	ND	100		mg/L	1	8/29/2018 7:12:39 PM	40021
Cadmium	ND	1.0		mg/L	1	8/29/2018 7:12:39 PM	40021
Chromium	ND	5.0		mg/L	1	8/29/2018 7:12:39 PM	40021
Lead	ND	5.0		mg/L	1	8/30/2018 1:35:51 PM	40021
Selenium	ND	1.0		mg/L	1	8/29/2018 7:12:39 PM	40021
Silver	ND	5.0		mg/L	1	8/29/2018 7:12:39 PM	40021
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
1-Methylnaphthalene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
2-Methylnaphthalene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Acenaphthylene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Acenaphthene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Fluorene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Phenanthrene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Anthracene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Fluoranthene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Pyrene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Benz(a)anthracene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Chrysene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Benzo(b)fluoranthene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Benzo(k)fluoranthene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Benzo(a)pyrene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	8/30/2018 6:18:37 PM	40026
Surr: N-hexadecane	0	35.2-113	SD	%Rec	10	8/30/2018 6:18:37 PM	40026
Surr: Benzo(e)pyrene	0	48.3-123	SD	%Rec	10	8/30/2018 6:18:37 PM	40026
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		mg/L	200	8/23/2018 6:39:00 PM	R53659
Toluene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Ethylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659

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: Souder, Miller and Associates
Project: Estancia
Lab ID: 1808E40-001
Matrix: AQUEOUS
Client Sample ID: Estancia
Collection Date: 8/21/2018 11:06:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Naphthalene	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
1-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 6:39:00 PM	R53659
2-Methylnaphthalene	ND	0.80		mg/L	200	8/23/2018 6:39:00 PM	R53659
Acetone	ND	2.0		mg/L	200	8/23/2018 6:39:00 PM	R53659
Bromobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Bromodichloromethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Bromoform	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Bromomethane	ND	0.60		mg/L	200	8/23/2018 6:39:00 PM	R53659
2-Butanone	ND	2.0		mg/L	200	8/23/2018 6:39:00 PM	R53659
Carbon disulfide	ND	2.0		mg/L	200	8/23/2018 6:39:00 PM	R53659
Carbon Tetrachloride	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Chlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Chloroethane	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
Chloroform	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Chloromethane	ND	0.60		mg/L	200	8/23/2018 6:39:00 PM	R53659
2-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
4-Chlorotoluene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
cis-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
Dibromochloromethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Dibromomethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,3-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,4-Dichlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Dichlorodifluoromethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1-Dichloroethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1-Dichloroethene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,3-Dichloropropane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
2,2-Dichloropropane	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Hexachlorobutadiene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
2-Hexanone	ND	2.0		mg/L	200	8/23/2018 6:39:00 PM	R53659
Isopropylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
4-Isopropyltoluene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
4-Methyl-2-pentanone	ND	2.0		mg/L	200	8/23/2018 6:39:00 PM	R53659
Methylene Chloride	ND	0.60		mg/L	200	8/23/2018 6:39:00 PM	R53659

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: Souder, Miller and Associates
Project: Estancia
Lab ID: 1808E40-001 **Matrix:** AQUEOUS

Client Sample ID: Estancia
Collection Date: 8/21/2018 11:06:00 AM
Received Date: 8/23/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		mg/L	200	8/23/2018 6:39:00 PM	R53659
n-Propylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
sec-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Styrene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
tert-Butylbenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
trans-1,2-DCE	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1,1-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,1,2-Trichloroethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Trichloroethene (TCE)	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Trichlorofluoromethane	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
1,2,3-Trichloropropane	ND	0.40		mg/L	200	8/23/2018 6:39:00 PM	R53659
Vinyl chloride	ND	0.20		mg/L	200	8/23/2018 6:39:00 PM	R53659
Xylenes, Total	ND	0.30		mg/L	200	8/23/2018 6:39:00 PM	R53659
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	200	8/23/2018 6:39:00 PM	R53659
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	200	8/23/2018 6:39:00 PM	R53659
Surr: Dibromofluoromethane	102	70-130		%Rec	200	8/23/2018 6:39:00 PM	R53659
Surr: Toluene-d8	94.6	70-130		%Rec	200	8/23/2018 6:39:00 PM	R53659

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180828017
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1808E40
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180828017-001	**Sampling Date**	8/21/2018	**Date/Time Received**	8/28/2018 11:00 AM
Client Sample ID	1808E40-001D / ESTANCIA	**Sampling Time**	11:06 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	8/30/2018 12:15:00 PM	RPU	SW846 CH7	
Flashpoint	>200	°F		8/30/2018 1:00:00 PM	GPB	EPA 1010	
pH	5.89	ph Units		8/29/2018 9:15:00 AM	LAC	SM 4500pH-B	
Reactive sulfide	ND	mg/L	0.2	9/6/2018 3:15:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Tarusclo, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180828017
Project Name: 1808E40

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	70-130	9/6/2018	9/6/2018
Cyanide (reactive)	0.526	mg/L	0.5	105.2	80-120	8/29/2018	8/30/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180828017-001	Reactive sulfide	ND	0.354	mg/L	0.393	90.1	70-130	9/6/2018	9/6/2018
180828017-001	Cyanide (reactive)	ND	5.12	mg/L	5	102.4	80-120	8/29/2018	8/30/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.16	mg/L	5	103.2	0.8	0-25	8/29/2018	8/30/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	8/29/2018	8/30/2018
Reactive sulfide	ND	mg/L	0.1	9/6/2018	9/6/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87883; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871089

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770659 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	19	1.0	20.00	0	92.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R53659	RunNo: 53659
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R53659	RunNo: 53659							
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672	Units: µg/L						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R53659	RunNo: 53659							
Prep Date:	Analysis Date: 8/23/2018	SeqNo: 1770672	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID lcs-40026	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776476 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0	83.8	28.6	113			
1-Methylnaphthalene	20	0.50	20.00	0	98.2	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	88.1	26.3	112			
Acenaphthylene	18	0.50	20.00	0	91.3	36.2	114			
Acenaphthene	17	0.50	20.00	0	84.2	35.6	116			
Fluorene	18	0.50	20.00	0	90.5	38.4	116			
Phenanthrene	19	0.50	20.00	0	93.2	42.3	118			
Anthracene	18	0.50	20.00	0	91.1	42.2	117			
Fluoranthene	19	0.50	20.00	0	94.7	42.5	118			
Pyrene	20	0.50	20.00	0	98.7	40.8	121			
Benz(a)anthracene	19	0.50	20.00	0	95.4	43	118			
Chrysene	18	0.50	20.00	0	90.4	39.4	119			
Benzo(b)fluoranthene	19	0.50	20.00	0	95.9	47.8	115			
Benzo(k)fluoranthene	21	0.50	20.00	0	106	40.5	120			
Benzo(a)pyrene	18	0.50	20.00	0	90.2	41.5	115			
Dibenz(a,h)anthracene	16	0.50	20.00	0	79.8	48.6	115			
Benzo(g,h,i)perylene	17	0.50	20.00	0	84.5	42	119			
Indeno(1,2,3-cd)pyrene	20	0.50	20.00	0	98.4	42.9	118			
Surr: N-hexadecane	91		87.60		104	35.2	113			
Surr: Benzo(e)pyrene	23		20.00		114	48.3	123			

Sample ID lcsd-40026	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 40026	RunNo: 53825
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776477 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	14	0.50	20.00	0	68.0	28.6	113	20.8	40.7	
1-Methylnaphthalene	16	0.50	20.00	0	80.3	27	113	20.1	38.4	
2-Methylnaphthalene	14	0.50	20.00	0	72.0	26.3	112	20.1	25.5	
Acenaphthylene	15	0.50	20.00	0	75.6	36.2	114	18.8	34.1	
Acenaphthene	15	0.50	20.00	0	76.4	35.6	116	9.71	32.1	
Fluorene	16	0.50	20.00	0	80.8	38.4	116	11.3	28	
Phenanthrene	16	0.50	20.00	0	78.3	42.3	118	17.4	37.4	
Anthracene	16	0.50	20.00	0	80.3	42.2	117	12.6	36.2	
Fluoranthene	16	0.50	20.00	0	82.2	42.5	118	14.1	26.6	
Pyrene	18	0.50	20.00	0	88.9	40.8	121	10.4	26.8	
Benz(a)anthracene	17	0.50	20.00	0	84.7	43	118	11.9	25.1	
Chrysene	17	0.50	20.00	0	82.6	39.4	119	9.02	23.3	
Benzo(b)fluoranthene	18	0.50	20.00	0	88.0	47.8	115	8.59	22.5	

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#: **1808E40**

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID	lcsd-40026	SampType:	LCSD	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSS02	Batch ID:	40026	RunNo:	53825					
Prep Date:	8/28/2018	Analysis Date:	8/30/2018	SeqNo:	1776477	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	18	0.50	20.00	0	91.5	40.5	120	14.4	30.9	
Benzo(a)pyrene	16	0.50	20.00	0	81.0	41.5	115	10.7	23.2	
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.9	48.6	115	14.7	26.5	
Benzo(g,h,i)perylene	15	0.50	20.00	0	75.4	42	119	11.4	30.7	
Indeno(1,2,3-cd)pyrene	17	0.50	20.00	0	87.2	42.9	118	12.1	25.4	
Surr: N-hexadecane	76		87.60		86.2	35.2	113	0	0	
Surr: Benzo(e)pyrene	19		20.00		93.6	48.3	123	0	0	

Sample ID	mb-40026	SampType:	MBLK	TestCode:	EPA Method 8270C: PAHs					
Client ID:	PBW	Batch ID:	40026	RunNo:	53825					
Prep Date:	8/28/2018	Analysis Date:	8/30/2018	SeqNo:	1776478	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	77		87.60		87.8	35.2	113			
Surr: Benzo(e)pyrene	18		20.00		90.0	48.3	123			

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID	MB-40028	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	40028	RunNo:	53784					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775035	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-40028	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	40028	RunNo:	53784					
Prep Date:	8/28/2018	Analysis Date:	8/29/2018	SeqNo:	1775036	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775201 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								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53785
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775203 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.4	80	120			
Barium	0.50	0.020	0.5000	0	100	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.48	0.0060	0.5000	0	95.4	80	120			
Silver	0.10	0.0050	0.1000	0	104	80	120			

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775493 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775495 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.020	0.5000	0	106	80	120			
Cadmium	0.53	0.0020	0.5000	0	106	80	120			
Chromium	0.50	0.0060	0.5000	0	99.2	80	120			
Selenium	0.48	0.050	0.5000	0	95.0	80	120			
Silver	0.11	0.0050	0.1000	0	112	80	120			

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID 1808E40-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Estancia	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775513 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.020	0.5000	0.05164	103	75	125			
Cadmium	0.51	0.0020	0.5000	0	102	75	125			
Chromium	0.48	0.0060	0.5000	0	96.0	75	125			
Selenium	0.45	0.050	0.5000	0	89.4	75	125			
Silver	0.11	0.0050	0.1000	0	107	75	125			

Sample ID 1808E40-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Estancia	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775514 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.020	0.5000	0.05164	104	75	125	0.325	20	
Cadmium	0.51	0.0020	0.5000	0	102	75	125	0.315	20	
Chromium	0.48	0.0060	0.5000	0	96.3	75	125	0.358	20	
Selenium	0.43	0.050	0.5000	0	85.1	75	125	4.89	20	
Silver	0.11	0.0050	0.1000	0	107	75	125	0.205	20	

Sample ID MB-40021	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775530 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Lead	ND	0.0050								

Sample ID LCS-40021	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 40021	RunNo: 53804
Prep Date: 8/28/2018	Analysis Date: 8/29/2018	SeqNo: 1775532 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			

Sample ID 1808E40-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Estancia	Batch ID: 40021	RunNo: 53827
Prep Date: 8/28/2018	Analysis Date: 8/30/2018	SeqNo: 1776464 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.020	0.5000	0	95.0	75	125			
Lead	0.46	0.0050	0.5000	0	92.1	75	125			

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#: 1808E40

07-Sep-18

Client: Souder, Miller and Associates

Project: Estancia

Sample ID	1808E40-001CMSD	SampType:	MSD	TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	Estancia	Batch ID:	40021	RunNo:	53827				
Prep Date:	8/28/2018	Analysis Date:	8/30/2018	SeqNo:	1776465	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.47	0.020	0.5000	0	94.5	75	125	0.526	20	
Lead	0.45	0.0050	0.5000	0	91.0	75	125	1.27	20	

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: SMA-FARM | Work Order Number: 1808E40 | RcptNo: 1

Received By: Anne Thorne 8/23/2018 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 8/23/2018 9:10:35 AM Anne Thorne

Reviewed By: JAB 08/23/18 CB: IO 8/23/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
Adjusted? NO
Checked by: IO 8/23/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401

Phone #: 505 325 7535

email or Fax#: Ashley maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Estancia

Project #:

Project Manager: Ashley Maxwell

Sampler:

On Ice: ☑ Yes ☐ No 2 ice packs

Sample Temperature: 3.3 + 0 = 3.3 °C
2.0 °C + 0 = 2.0 °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.
			Estancia			1808 E40
8/21/18	11:06	Aquer	Harders	Various	Various	-001

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
					X	X			X		X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	1605		Mistie Walt	8/22/18	1605
8/22/18	1837	Mistie Walt		08/23/18	0700

Remarks: 8260 Full List
Report TCLP ~~units~~ compound
at TCLP units
CC Tom Long Invoice Enterprise

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.

10/16/18

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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Western Refining Pipeline, LLC.
111 County Road 4990
Bloomfield, NM 87413

2. Originating Site:
Peabody – El Sugundo Mine – 35.668874, -107.861818
Grants, NM 87020

3. Location of Material (Street Address, City, State or ULSTR):
Same as originating Site

4. Source and Description of Waste:
Hydro test water from brand new steel pipe. The hydrotest project is part of a pipeline re-route project taking place on Western Refining's Westline located on El Sugundo Mine Property.

Estimated Volume 180 bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Matthew Krakow, representative or authorized agent for Western Refining Pipeline, LLC. do hereby
PRINT & SIGN NAME 10-12-18 COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, N/A, representative for N/A do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
To be determined.

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss, LLC Permit #: UICI-005 (Class 1 Non-Hazardous Well)

Address of Facility: 345 CR 350, San Juan County, Aztec, NM 87410
Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 10-17-18

SIGNATURE: Electronic TELEPHONE NO.: (505-307-6974

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

March 18, 2016

Matt Krakow
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4135
FAX (505) 632-3911

RE: Pipeline Hydrotest OrderNo.: 1603460

Dear Matt Krakow:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/9/2016 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 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1603460**
Date Reported: **3/18/2016**

CLIENT: Western Refining Southwest, Inc.
Project: Pipeline Hydrotest
Lab ID: 1603460-001 **Matrix:** AQUEOUS

Client Sample ID: Pipeline New Pipe
Collection Date: 3/8/2016 1:30:00 PM
Received Date: 3/9/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00020		mg/L	1	3/14/2016 4:14:16 PM	24205
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Arsenic	ND	0.020		mg/L	1	3/16/2016 8:08:20 AM	24202
Barium	0.085	0.020		mg/L	1	3/16/2016 8:08:20 AM	24202
Cadmium	ND	0.0020		mg/L	1	3/16/2016 8:08:20 AM	24202
Chromium	ND	0.0060		mg/L	1	3/16/2016 8:08:20 AM	24202
Lead	ND	0.0050		mg/L	1	3/16/2016 8:08:20 AM	24202
Selenium	ND	0.050		mg/L	1	3/16/2016 8:08:20 AM	24202
Silver	ND	0.0050		mg/L	1	3/16/2016 8:08:20 AM	24202

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
R	RPD outside accepted recovery limits	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#: 1603460

18-Mar-16

Client: Western Refining Southwest, Inc.

Project: Pipeline Hydrotest

Sample ID	MB-24205	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004533	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24205	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	24205	RunNo:	32782					
Prep Date:	3/10/2016	Analysis Date:	3/14/2016	SeqNo:	1004534	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

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
R	RPD outside accepted recovery limits	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#: 1603460

18-Mar-16

Client: Western Refining Southwest, Inc.

Project: Pipeline Hydrotest

Sample ID MB-24202	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 24202	RunNo: 32775
Prep Date: 3/10/2016	Analysis Date: 3/14/2016	SeqNo: 1004070 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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-24202	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 24202	RunNo: 32775
Prep Date: 3/10/2016	Analysis Date: 3/14/2016	SeqNo: 1004071 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.5	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.0	80	120			
Chromium	0.48	0.0060	0.5000	0	95.9	80	120			
Lead	0.49	0.0050	0.5000	0	97.1	80	120			
Selenium	0.49	0.050	0.5000	0	99.0	80	120			
Silver	0.099	0.0050	0.1000	0	99.2	80	120			

Sample ID LCSD-24202	SampType: LCSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSS02	Batch ID: 24202	RunNo: 32775
Prep Date: 3/10/2016	Analysis Date: 3/14/2016	SeqNo: 1004072 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	104	80	120	4.47	20	
Barium	0.49	0.020	0.5000	0	98.5	80	120	2.12	20	
Cadmium	0.50	0.0020	0.5000	0	101	80	120	2.63	20	
Chromium	0.50	0.0060	0.5000	0	99.3	80	120	3.48	20	
Lead	0.50	0.0050	0.5000	0	100	80	120	3.12	20	
Selenium	0.52	0.050	0.5000	0	103	80	120	4.11	20	
Silver	0.10	0.0050	0.1000	0	101	80	120	1.48	20	

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
R	RPD outside accepted recovery limits	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: Western Refining Southw Work Order Number: 1603460 RcptNo: 1

Received by/date: 03/09/16

Logged By: Lindsay Mangin 3/9/2016 7:15:00 AM

Completed By: Lindsay Mangin 3/9/2016 9:28:01 AM

Reviewed By: TO 03/09/16

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: 1 (<2 or >12 unless noted)

Adjusted? 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: 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	1.1	Good	Yes			

Chain-of-Custody Record

Western Refining

g Address: 50 CR4990
omfield, NM 87413
e #: 505-632-4169
or Fax#:
C Package:
andard ☐ Level 4 (Full Validation)
editation
LAP ☐ Other
D (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Pipeline Hydrotest
Project #: 12615518
Project Manager: Matt Kraklow
Sampler: Matt Kraklow
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

e	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603460	Analysis Request: BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
	1:30	H2O	Pipeline new pipe	500mL poly	HNO_3	-001							X									

Time: 1602 Relinquished by: [signature] Received by: Christi Walker Date: 3/8/16 Time: 1602
Time: 1829 Relinquished by: Christine Walker Received by: [signature] Date: 03/09/16 Time: 0715

Remarks:

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.

2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Gobernador Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL D Section 31 Township 30 North Range 7 West; 36.774685,-107.617915

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt Wastewater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / (bbls) Known Volume (to be entered by the operator at the end of the haul) _____ yd^3/bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long), representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long), representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To be determined.

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 10-23-18
SIGNATURE: electronic TELEPHONE NO.: 505-367-6974
Surface Waste Management Facility Authorized Agent

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

March 27, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Gobernador

OrderNo.: 1803607

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2018 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1803607
Date Reported: 3/27/2018

CLIENT: Souder, Miller and Associates
Project: Gobernador
Lab ID: 1803607-001 **Matrix:** AQUEOUS

Client Sample ID: Gobernador Non Exempt
Collection Date: 3/8/2018 12:09:00 PM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	1.0		mg/L	5	3/19/2018 5:32:43 PM	37099
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Arsenic	ND	5.0		mg/L	1	3/21/2018 4:25:51 PM	37055
Barium	ND	100		mg/L	1	3/21/2018 3:33:52 PM	37055
Cadmium	ND	1.0		mg/L	1	3/21/2018 3:33:52 PM	37055
Chromium	ND	5.0		mg/L	1	3/21/2018 3:33:52 PM	37055
Lead	ND	5.0		mg/L	1	3/21/2018 3:33:52 PM	37055
Selenium	ND	1.0		mg/L	1	3/21/2018 3:33:52 PM	37055
Silver	ND	5.0		mg/L	1	3/21/2018 3:33:52 PM	37055
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
1-Methylnaphthalene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
2-Methylnaphthalene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Acenaphthylene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Acenaphthene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Fluorene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Phenanthrene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Anthracene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Fluoranthene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Pyrene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Benz(a)anthracene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Chrysene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Benzo(b)fluoranthene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Benzo(k)fluoranthene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Benzo(a)pyrene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	1	3/15/2018 8:30:51 PM	36978
Surr: N-hexadecane	58.5	18.7-145	D	%Rec	1	3/15/2018 8:30:51 PM	36978
Surr: Benzo(e)pyrene	79.5	28.2-137	D	%Rec	1	3/15/2018 8:30:51 PM	36978
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		µg/L	200	3/12/2018 7:41:00 PM	R49721
Toluene	0.24	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Ethylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Methyl tert-butyl ether (MTBE)	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2,4-Trimethylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,3,5-Trimethylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2-Dichloroethane (EDC)	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721

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

Qualifiers:

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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: Souder, Miller and Associates
Project: Gobernador
Lab ID: 1803607-001
Matrix: AQUEOUS
Client Sample ID: Gobernador Non Exempt
Collection Date: 3/8/2018 12:09:00 PM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Naphthalene	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
1-Methylnaphthalene	ND	0.80		µg/L	200	3/12/2018 7:41:00 PM	R49721
2-Methylnaphthalene	ND	0.80		µg/L	200	3/12/2018 7:41:00 PM	R49721
Acetone	2.1	2.0		µg/L	200	3/12/2018 7:41:00 PM	R49721
Bromobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Bromodichloromethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Bromoform	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Bromomethane	ND	0.60		µg/L	200	3/12/2018 7:41:00 PM	R49721
2-Butanone	ND	2.0		µg/L	200	3/12/2018 7:41:00 PM	R49721
Carbon disulfide	ND	2.0		µg/L	200	3/12/2018 7:41:00 PM	R49721
Carbon Tetrachloride	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Chlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Chloroethane	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
Chloroform	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Chloromethane	ND	0.60		µg/L	200	3/12/2018 7:41:00 PM	R49721
2-Chlorotoluene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
4-Chlorotoluene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
cis-1,2-DCE	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
cis-1,3-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2-Dibromo-3-chloropropane	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
Dibromochloromethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Dibromomethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,3-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,4-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Dichlorodifluoromethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1-Dichloroethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1-Dichloroethene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2-Dichloropropane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,3-Dichloropropane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
2,2-Dichloropropane	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Hexachlorobutadiene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
2-Hexanone	ND	2.0		µg/L	200	3/12/2018 7:41:00 PM	R49721
Isopropylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
4-Isopropyltoluene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
4-Methyl-2-pentanone	ND	2.0		µg/L	200	3/12/2018 7:41:00 PM	R49721
Methylene Chloride	ND	0.60		µg/L	200	3/12/2018 7:41:00 PM	R49721

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

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Gobernador
Lab ID: 1803607-001 **Matrix:** AQUEOUS

Client Sample ID: Gobernador Non Exempt
Collection Date: 3/8/2018 12:09:00 PM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		µg/L	200	3/12/2018 7:41:00 PM	R49721
n-Propylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
sec-Butylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Styrene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
tert-Butylbenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1,1,2-Tetrachloroethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1,2,2-Tetrachloroethane	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
Tetrachloroethene (PCE)	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
trans-1,2-DCE	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
trans-1,3-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2,3-Trichlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2,4-Trichlorobenzene	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1,1-Trichloroethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,1,2-Trichloroethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Trichloroethene (TCE)	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Trichlorofluoromethane	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
1,2,3-Trichloropropane	ND	0.40		µg/L	200	3/12/2018 7:41:00 PM	R49721
Vinyl chloride	ND	0.20		µg/L	200	3/12/2018 7:41:00 PM	R49721
Xylenes, Total	ND	0.30		µg/L	200	3/12/2018 7:41:00 PM	R49721
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	200	3/12/2018 7:41:00 PM	R49721
Surr: 4-Bromofluorobenzene	80.1	70-130		%Rec	200	3/12/2018 7:41:00 PM	R49721
Surr: Dibromofluoromethane	95.8	70-130		%Rec	200	3/12/2018 7:41:00 PM	R49721
Surr: Toluene-d8	85.6	70-130		%Rec	200	3/12/2018 7:41:00 PM	R49721

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Qualifiers:				
	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180313045
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1803607
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180313045-001	**Sampling Date**	3/8/2018	**Date/Time Received**	3/13/2018 10:24 AM
Client Sample ID	1803607-001D / GOBERNADOR NON EXEMPT				
Matrix	Water	**Sampling Time**	12:09 PM		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	0.314	mg/L	0.1	3/14/2018	RPU	SW846 CH7	
Flashpoint	>200	°F		3/21/2018 11:28:00 AM	GPB	EPA 1010	
pH	7.27	ph Units		3/14/2018 3:00:00 PM	RPU	SM 4500pH-B	
Reactive sulfide	ND	mg/L	0.19	3/22/2018 1:50:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C596
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180313045
Project Name: 1803607

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.160	mg/L	0.2	80.0	70-130	3/22/2018	3/22/2018
Cyanide (reactive)	0.538	mg/L	0.5	107.6	80-120	3/14/2018	3/14/2018

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	11.8	0-25	3/22/2018	3/22/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180316029-001A	Reactive sulfide	ND	0.529	mg/L	0.661	80.0	70-130	3/22/2018	3/22/2018
180313041-001	Cyanide (reactive)	ND	5.08	mg/L	5	101.6	80-120	3/14/2018	3/14/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.13	mg/L	5	102.6	1.0	0-25	3/14/2018	3/14/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	3/14/2018	3/14/2018
Reactive sulfide	ND	mg/L	0.1	3/22/2018	3/22/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608099 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.1	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.3	70	130			
Surr: Toluene-d8	8.6		10.00		85.6	70	130			

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608102 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608102 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608102 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.3	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.9	70	130			
Surr: Toluene-d8	8.7		10.00		87.3	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#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID lcs-36978	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614453 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	90.0	28.6	113			
1-Methylnaphthalene	19	0.50	20.00	0	95.3	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	90.0	26.3	112			
Acenaphthylene	18	0.50	20.00	0	87.7	36.2	114			
Acenaphthene	18	0.50	20.00	0	89.2	35.6	116			
Fluorene	19	0.50	20.00	0	95.4	38.4	116			
Phenanthrene	20	0.50	20.00	0	97.9	42.3	118			
Anthracene	20	0.50	20.00	0	98.1	42.2	117			
Fluoranthene	21	0.50	20.00	0	106	42.5	118			
Pyrene	21	0.50	20.00	0	104	40.8	121			
Benz(a)anthracene	20	0.50	20.00	0	98.7	43	118			
Chrysene	12	0.50	20.00	0	59.2	39.4	119			
Benzo(b)fluoranthene	21	0.50	20.00	0	104	47.8	115			
Benzo(k)fluoranthene	20	0.50	20.00	0	98.2	40.5	120			
Benzo(a)pyrene	19	0.50	20.00	0	97.1	41.5	115			
Dibenz(a,h)anthracene	19	0.50	20.00	0	93.5	48.6	115			
Benzo(g,h,i)perylene	21	0.50	20.00	0	106	42	119			
Indeno(1,2,3-cd)pyrene	21	0.50	20.00	0	103	42.9	118			
Surr: N-hexadecane	69		87.60		78.9	18.7	145			
Surr: Benzo(e)pyrene	19		20.00		93.7	28.2	137			

Sample ID lcsd-36978	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614454 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	10	0.50	20.00	0	50.5	28.6	113	56.2	40.7	R
1-Methylnaphthalene	10	0.50	20.00	0	51.4	27	113	59.9	38.4	R
2-Methylnaphthalene	9.9	0.50	20.00	0	49.7	26.3	112	57.7	25.5	R
Acenaphthylene	11	0.50	20.00	0	56.5	36.2	114	43.3	34.1	R
Acenaphthene	11	0.50	20.00	0	56.8	35.6	116	44.4	32.1	R
Fluorene	12	0.50	20.00	0	60.1	38.4	116	45.4	28	R
Phenanthrene	13	0.50	20.00	0	64.3	42.3	118	41.4	37.4	R
Anthracene	13	0.50	20.00	0	66.2	42.2	117	38.8	36.2	R
Fluoranthene	14	0.50	20.00	0	68.9	42.5	118	42.8	26.6	R
Pyrene	13	0.50	20.00	0	64.4	40.8	121	46.8	26.8	R
Benz(a)anthracene	13	0.50	20.00	0	65.7	43	118	40.1	25.1	R
Chrysene	13	0.50	20.00	0	63.9	39.4	119	7.64	23.3	
Benzo(b)fluoranthene	14	0.50	20.00	0	68.4	47.8	115	41.5	22.5	R

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#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID lcsd-36978	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614454 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	14	0.50	20.00	0	69.7	40.5	120	33.9	30.9	R
Benzo(a)pyrene	13	0.50	20.00	0	63.9	41.5	115	41.2	23.2	R
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.2	48.6	115	31.3	26.5	R
Benzo(g,h,i)perylene	14	0.50	20.00	0	68.1	42	119	43.3	30.7	R
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	68.6	42.9	118	40.0	25.4	R
Surr: N-hexadecane	32		87.60		36.8	18.7	145	0	0	
Surr: Benzo(e)pyrene	18		20.00		87.9	28.2	137	0	0	

Sample ID mb-36978	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614455 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	56		87.60		63.4	18.7	145			
Surr: Benzo(e)pyrene	15		20.00		75.6	28.2	137			

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#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID	MB-37099	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	37099	RunNo:	49907					
Prep Date:	3/19/2018	Analysis Date:	3/19/2018	SeqNo:	1615564	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-37099	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	37099	RunNo:	49907					
Prep Date:	3/19/2018	Analysis Date:	3/19/2018	SeqNo:	1615579	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	91.3	80	120			

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#: 1803607

27-Mar-18

Client: Souder, Miller and Associates

Project: Gobernador

Sample ID MB-37055	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617934 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-37055	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617936 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.020	0.5000	0	105	80	120			
Cadmium	0.53	0.0020	0.5000	0	106	80	120			
Chromium	0.51	0.0060	0.5000	0	103	80	120			
Lead	0.49	0.0050	0.5000	0	97.4	80	120			
Selenium	0.53	0.050	0.5000	0	106	80	120			
Silver	0.10	0.0050	0.1000	0	105	80	120			

Sample ID MB-37055	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617983 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID LCS-37055	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617985 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			

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: SMA-FARM | Work Order Number: 1803607 | RcptNo: 1

Received By: Isaiah Ortiz 3/10/2018 8:00:00 AM

Completed By: Anne Thorne 3/12/2018 10:32:27 AM

Reviewed By: JMO 3/12/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1 2 (<2 or >12 unless noted)

Adjusted? —

Checked by: AS 03/12/18

Special Handling (if applicable)

15. 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: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505-325-7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
Gobernador

Project #:
Gobernador Non Exempt

Project Manager:
Ashley Maxwell

Sampler: RW

On Ice: ☐ Yes ☐ No

Sample Temperature: 0°

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. #1803607	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIM)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles (Y or N)
3-8-18	12:09	Aqus	Gobernador Non Exempt	Various	Various	001						X	X			X		X 1201					

Remarks: 8260 Full List Report
TCLP Compound at TCLP limits
Invoice Enterprise CC Tom Long

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/9/18	1610			3/9/18	1610
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/9/18	1804			3/10/18	800

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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Navajo City Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
Section 33 Township 30 North Range 7 West; 36.36.769552, -107.582618 San Juan County, NM

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume _60__ yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____Agua Moss, LLC_____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Various Apporved Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: TRAVIS Gibson TITLE: Foreman DATE: 10/23/2018
SIGNATURE: Electronic TELEPHONE NO.: 5053076974
Surface Waste Management Facility Authorized Agent

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

January 11, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX

RE: Navajo CS

OrderNo.: 1901025

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/3/2019 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1901025**
Date Reported: **1/11/2019**

CLIENT: Souder, Miller and Associates
Project: Navajo CS
Lab ID: 1901025-001 **Matrix:** AQUEOUS

Client Sample ID: Non Exempt
Collection Date: 1/2/2019 1:38:00 PM
Received Date: 1/3/2019 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS						Analyst: **DBK**
Arsenic	ND	0.50		mg/L	1	1/8/2019 6:28:57 PM
Barium	ND	10		mg/L	1	1/8/2019 6:28:57 PM
Cadmium	ND	0.10		mg/L	1	1/8/2019 6:28:57 PM
Chromium	ND	0.50		mg/L	1	1/8/2019 6:28:57 PM
Lead	ND	0.50		mg/L	1	1/8/2019 6:28:57 PM
Selenium	ND	0.10		mg/L	1	1/8/2019 6:28:57 PM
Silver	ND	0.50		mg/L	1	1/8/2019 6:28:57 PM
EPA METHOD 7470: MERCURY						Analyst: **pmf**
Mercury	ND	0.020		mg/L	1	1/10/2019 1:51:13 PM
EPA METHOD 8270C: PAHS						Analyst: **DAM**
Naphthalene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
1-Methylnaphthalene	ND	50	D	µg/L	10	1/9/2019 3:44:53 PM
2-Methylnaphthalene	ND	50	D	µg/L	10	1/9/2019 3:44:53 PM
Acenaphthylene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Acenaphthene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Fluorene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Phenanthrene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Anthracene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Fluoranthene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Pyrene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Benz(a)anthracene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Chrysene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Benzo(b)fluoranthene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Benzo(k)fluoranthene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Benzo(a)pyrene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	1/9/2019 3:44:53 PM
Surr: N-hexadecane	0	35.2-113	SD	%Rec	10	1/9/2019 3:44:53 PM
Surr: Benzo(e)pyrene	0	48.3-123	SD	%Rec	10	1/9/2019 3:44:53 PM
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**
Benzene	ND	0.50		mg/L	200	1/3/2019 1:53:27 PM
Toluene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Ethylbenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM

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: Souder, Miller and Associates
Client Sample ID: Non Exempt
Project: Navajo CS
Collection Date: 1/2/2019 1:38:00 PM
Lab ID: 1901025-001 **Matrix:** AQUEOUS **Received Date:** 1/3/2019 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Naphthalene	ND	0.40		mg/L	200	1/3/2019 1:53:27 PM
1-Methylnaphthalene	ND	0.80		mg/L	200	1/3/2019 1:53:27 PM
2-Methylnaphthalene	ND	0.80		mg/L	200	1/3/2019 1:53:27 PM
Acetone	ND	2.0		mg/L	200	1/3/2019 1:53:27 PM
Bromobenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Bromodichloromethane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Bromoform	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Bromomethane	ND	0.60		mg/L	200	1/3/2019 1:53:27 PM
2-Butanone	ND	2.0		mg/L	200	1/3/2019 1:53:27 PM
Carbon disulfide	ND	2.0		mg/L	200	1/3/2019 1:53:27 PM
Carbon Tetrachloride	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Chlorobenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Chloroethane	ND	0.40		mg/L	200	1/3/2019 1:53:27 PM
Chloroform	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Chloromethane	ND	0.60		mg/L	200	1/3/2019 1:53:27 PM
2-Chlorotoluene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
4-Chlorotoluene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
cis-1,2-DCE	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	1/3/2019 1:53:27 PM
Dibromochloromethane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Dibromomethane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,2-Dichlorobenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,3-Dichlorobenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,4-Dichlorobenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Dichlorodifluoromethane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,1-Dichloroethane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,1-Dichloroethene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,2-Dichloropropane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
1,3-Dichloropropane	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
2,2-Dichloropropane	ND	0.40		mg/L	200	1/3/2019 1:53:27 PM
1,1-Dichloropropene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
Hexachlorobutadiene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
2-Hexanone	ND	2.0		mg/L	200	1/3/2019 1:53:27 PM
Isopropylbenzene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
4-Isopropyltoluene	ND	0.20		mg/L	200	1/3/2019 1:53:27 PM
4-Methyl-2-pentanone	ND	2.0		mg/L	200	1/3/2019 1:53:27 PM
Methylene Chloride	ND	0.60		mg/L	200	1/3/2019 1:53:27 PM

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

Qualifiers:

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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
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1901025-001D NON EXEMPT — SAMPLE RESULTS - 01

Collected date/time: 01/02/19 13:38 — L1058022

ONE LAB. NATIONWIDE

Wet Chemistry by Method 4500 CN E-201

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Reactive Cyanide	ND		0.00500	1	01/07/2019 11:30	WG1219523

Wet Chemistry by Method 9034-9030B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Reactive Sulfide	ND		0.0500	1	01/04/2019 14:33	WG1219128

Wet Chemistry by Method 9040C

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	su			date / time	
Corrosivity by pH	6.44	T6	1	01/04/2019 14:29	WG1218005

Sample Narrative:
L1058022-01 WG1218005: 6.44 at 15.4C

Wet Chemistry by Method D93/1010A

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	deg F			date / time	
Flashpoint	DNF at 170		1	01/05/2019 14:38	WG1218441

Method Blank (MB)

(MB) R3374591-1 01/09/19 14:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3374591-2 01/09/19 14:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Sulfide	0.500	0.453	90.6	85.0-115	

WG1219441

Wet Chemistry by Method D93/1C10A

QUALITY CONTROL SUMMARY

L1058372-01

ONE LAB. NATIONWIDE.

L1057641-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1057641-01 01/05/19 14:38 • (DUP) R3373657-2 01/05/19 14:36

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	DNF at 170	DNF at 170	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3373657-1 01/05/19 14:38

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	82.7	101	96.0-104	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901025

11-Jan-19

Client: Souder, Miller and Associates

Project: Navajo CS

Sample ID	MB-42465	SampType:	MBLK	TestCode:	EPA Method 6020: Total Metals				
Client ID:	PBW	Batch ID:	42465	RunNo:	56855				
Prep Date:	1/7/2019	Analysis Date:	1/8/2019	SeqNo:	1902759	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Barium	ND	0.0010								
Cadmium	ND	0.0010								
Chromium	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Silver	ND	0.0010								

Sample ID	LLLCS-42465	SampType:	LCSLL	TestCode:	EPA Method 6020: Total Metals				
Client ID:	BatchQC	Batch ID:	42465	RunNo:	56855				
Prep Date:	1/7/2019	Analysis Date:	1/8/2019	SeqNo:	1902762	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	96.8	70	130			
Barium	ND	0.0010	0.001000	0	98.1	70	130			
Cadmium	ND	0.0010	0.001000	0	99.2	70	130			
Chromium	0.0011	0.0010	0.001000	0	105	70	130			
Lead	ND	0.0010	0.001000	0	99.4	70	130			
Selenium	ND	0.0010	0.001000	0	96.1	70	130			
Silver	0.0011	0.0010	0.001000	0	109	70	130			

Sample ID	LCS-42465	SampType:	LCS	TestCode:	EPA Method 6020: Total Metals				
Client ID:	LCSW	Batch ID:	42465	RunNo:	56855				
Prep Date:	1/7/2019	Analysis Date:	1/8/2019	SeqNo:	1902765	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0010	0.05000	0	98.6	80	120			
Barium	0.052	0.0010	0.05000	0	105	80	120			
Cadmium	0.051	0.0010	0.05000	0	103	80	120			
Chromium	0.050	0.0010	0.05000	0	101	80	120			
Lead	0.050	0.0010	0.05000	0	100	80	120			
Selenium	0.049	0.0010	0.05000	0	98.1	80	120			
Silver	0.051	0.0010	0.05000	0	101	80	120			

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#: 1901025

11-Jan-19

Client: Souder, Miller and Associates
Project: Navajo CS

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: W56753	RunNo: 56753							
Prep Date:	Analysis Date: 1/3/2019	SeqNo: 1899264	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: W56753	RunNo: 56753							
Prep Date:	Analysis Date: 1/3/2019	SeqNo: 1899265	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	98.2	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#: 1901025

11-Jan-19

Client: Souder, Miller and Associates

Project: Navajo CS

Sample ID	lcs-42454	SampType:	LCS	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSW	Batch ID:	42454	RunNo:	56875					
Prep Date:	1/4/2019	Analysis Date:	1/9/2019	SeqNo:	1903266	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.4	29.6	105			
1-Methylnaphthalene	16	1.0	20.00	0	78.8	33.4	112			
2-Methylnaphthalene	15	1.0	20.00	0	73.4	28.6	108			
Acenaphthylene	16	0.50	20.00	0	79.3	35.7	116			
Acenaphthene	16	0.50	20.00	0	79.9	32.4	118			
Fluorene	16	0.50	20.00	0	80.8	35.6	118			
Phenanthrene	16	0.50	20.00	0	81.1	36.3	130			
Anthracene	17	0.50	20.00	0	84.1	34.8	135			
Fluoranthene	17	0.50	20.00	0	85.2	41	136			
Pyrene	17	0.50	20.00	0	83.2	44.8	136			
Benz(a)anthracene	17	0.50	20.00	0	85.4	41.1	136			
Chrysene	14	0.50	20.00	0	68.4	37.9	132			
Benzo(b)fluoranthene	16	0.50	20.00	0	81.0	39	144			
Benzo(k)fluoranthene	17	0.50	20.00	0	82.8	40	144			
Benzo(a)pyrene	16	0.50	20.00	0	79.2	36.8	137			
Dibenz(a,h)anthracene	15	0.50	20.00	0	74.8	31.5	141			
Benzo(g,h,i)perylene	17	0.50	20.00	0	84.3	32.9	138			
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.2	40.9	143			
Surr: N-hexadecane	69		87.60		79.1	35.2	113			
Surr: Benzo(e)pyrene	17		20.00		83.0	48.3	123			

Sample ID	lcsd-42454	SampType:	LCSD	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSS02	Batch ID:	42454	RunNo:	56875					
Prep Date:	1/4/2019	Analysis Date:	1/9/2019	SeqNo:	1903267	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	75.2	29.6	105	1.07	68.7	
1-Methylnaphthalene	14	1.0	20.00	0	71.8	33.4	112	9.30	66	
2-Methylnaphthalene	14	1.0	20.00	0	69.3	28.6	108	5.75	68.7	
Acenaphthylene	15	0.50	20.00	0	76.0	35.7	116	4.25	64.9	
Acenaphthene	15	0.50	20.00	0	75.9	32.4	118	5.13	53.2	
Fluorene	15	0.50	20.00	0	74.7	35.6	118	7.85	62.4	
Phenanthrene	16	0.50	20.00	0	80.5	36.3	130	0.743	62.6	
Anthracene	17	0.50	20.00	0	83.9	34.8	135	0.238	62.4	
Fluoranthene	17	0.50	20.00	0	85.3	41	136	0.117	59.4	
Pyrene	16	0.50	20.00	0	77.8	44.8	136	6.71	55.4	
Benz(a)anthracene	15	0.50	20.00	0	73.7	41.1	136	14.7	56.6	
Chrysene	12	0.50	20.00	0	62.1	37.9	132	9.66	51.9	
Benzo(b)fluoranthene	15	0.50	20.00	0	73.6	39	144	9.57	59.1	

Qualifiers:

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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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1901025**

11-Jan-19

Client: Souder, Miller and Associates

Project: Navajo CS

Sample ID	MB-42524	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	42524	RunNo:	56898				
Prep Date:	1/9/2019	Analysis Date:	1/10/2019	SeqNo:	1903938	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-42524	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	42524	RunNo:	56898				
Prep Date:	1/9/2019	Analysis Date:	1/10/2019	SeqNo:	1903939	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.7	80	120			

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

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W. Broadway Farmington NM 87401

Phone #: 505 325-7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☑ Rush 4 DAY

Project Name: Navajo CS

Project #:

Project Manager: Ashley Maxwell

Sampler: Randy Watson

On Ice: Yes

Sample Temperature: [redacted]

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		BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA) TCLP				Air Bubbles (Y or N)
1-2-19	13:30	Aqueous	Non Exempt	Various	Various	20						X	X			X	X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/2/19	1740	[signature]	[signature]	1/2/19	1740
1/2/19	1838	[signature]	[signature]	1/3/19	9:10

Remarks: 8260 Full List, Report TCLP compounds At TCLP Limits

INVOICE Enterprise CC Tom Long

Courier - VVZ 1/3/19

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.

Outlook Mail

Search Mail and People

New | Reply | Delete Archive Junk | Sweep Move to Categories ...

Folders

- Inbox 4
- Junk Email 1
- Drafts 105
- Sent Items 1
- Deleted Items
- Archive
- Conversation History

C-138 COW Chaco Plant

LT Long, Thomas
Yesterday, 12:50 PM
You; Shirley, Randall (RShirley@eprod.com)

You replied on 8/13/2018 12:57 PM.

C-138 Chaco Pant 8-13-... 46 KB
Rpt_1803601_Final_v1.pdf 225 KB

2 attachments (271 KB) Download all Save all to OneDrive - Personal

Gary,

Please find the attached C-138 COW and this year's analytical data for Chaco Plant. If you have any questions, please call or e

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

Enterprise Products

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Upgrade to Premium

10/31/2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. **Originating Site:**
Chaco Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
UL M Section 16, T26N, R12W; 36.482905, -108.119193

4. **Source and Description of Waste:**
Source:
Description: Hydrocarbon impacted soil associated blow down pit.
Estimated Volume _500__ yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for _____Agua Moss, Inc._____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter: TO BE DETERMINED**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 10-28-18
SIGNATURE: Electronic TELEPHONE NO.: (505) 309-6974
Surface Waste Management Facility Authorized Agent

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

March 27, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Chaco

OrderNo.: 1803601

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2018 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1803601
Date Reported: 3/27/2018

CLIENT: Souder, Miller and Associates
Project: Chaco
Lab ID: 1803601-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 3/8/2018 10:32:00 AM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.20		mg/L	1	3/19/2018 5:23:30 PM	37099
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Arsenic	ND	5.0		mg/L	1	3/21/2018 4:23:01 PM	37055
Barium	ND	100		mg/L	1	3/21/2018 3:29:03 PM	37055
Cadmium	ND	1.0		mg/L	1	3/21/2018 3:29:03 PM	37055
Chromium	ND	5.0		mg/L	1	3/21/2018 3:29:03 PM	37055
Lead	ND	5.0		mg/L	1	3/21/2018 3:29:03 PM	37055
Selenium	ND	1.0		mg/L	1	3/21/2018 3:29:03 PM	37055
Silver	ND	5.0		mg/L	1	3/21/2018 3:29:03 PM	37055
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
1-Methylnaphthalene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
2-Methylnaphthalene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Acenaphthylene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Acenaphthene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Fluorene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Phenanthrene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Anthracene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Fluoranthene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Pyrene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Benz(a)anthracene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Chrysene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Benzo(b)fluoranthene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Benzo(k)fluoranthene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Benzo(a)pyrene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Dibenz(a,h)anthracene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Benzo(g,h,i)perylene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Indeno(1,2,3-cd)pyrene	ND	2.5	D	µg/L	1	3/15/2018 7:42:32 PM	36978
Surr: N-hexadecane	70.1	18.7-145	D	%Rec	1	3/15/2018 7:42:32 PM	36978
Surr: Benzo(e)pyrene	82.9	28.2-137	D	%Rec	1	3/15/2018 7:42:32 PM	36978
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.50		µg/L	200	3/12/2018 6:54:00 PM	R49721
Toluene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Ethylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Methyl tert-butyl ether (MTBE)	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2,4-Trimethylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,3,5-Trimethylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2-Dichloroethane (EDC)	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721

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: Souder, Miller and Associates
Project: Chaco
Lab ID: 1803601-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 3/8/2018 10:32:00 AM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Naphthalene	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
1-Methylnaphthalene	ND	0.80		µg/L	200	3/12/2018 6:54:00 PM	R49721
2-Methylnaphthalene	ND	0.80		µg/L	200	3/12/2018 6:54:00 PM	R49721
Acetone	ND	2.0		µg/L	200	3/12/2018 6:54:00 PM	R49721
Bromobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Bromodichloromethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Bromoform	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Bromomethane	ND	0.60		µg/L	200	3/12/2018 6:54:00 PM	R49721
2-Butanone	ND	2.0		µg/L	200	3/12/2018 6:54:00 PM	R49721
Carbon disulfide	ND	2.0		µg/L	200	3/12/2018 6:54:00 PM	R49721
Carbon Tetrachloride	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Chlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Chloroethane	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
Chloroform	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Chloromethane	ND	0.60		µg/L	200	3/12/2018 6:54:00 PM	R49721
2-Chlorotoluene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
4-Chlorotoluene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
cis-1,2-DCE	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
cis-1,3-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2-Dibromo-3-chloropropane	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
Dibromochloromethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Dibromomethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,3-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,4-Dichlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Dichlorodifluoromethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1-Dichloroethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1-Dichloroethene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2-Dichloropropane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,3-Dichloropropane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
2,2-Dichloropropane	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Hexachlorobutadiene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
2-Hexanone	ND	2.0		µg/L	200	3/12/2018 6:54:00 PM	R49721
Isopropylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
4-Isopropyltoluene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
4-Methyl-2-pentanone	ND	2.0		µg/L	200	3/12/2018 6:54:00 PM	R49721
Methylene Chloride	ND	0.60		µg/L	200	3/12/2018 6:54:00 PM	R49721

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Chaco
Lab ID: 1803601-001 **Matrix:** AQUEOUS

Client Sample ID: Chaco Non Exempt
Collection Date: 3/8/2018 10:32:00 AM
Received Date: 3/10/2018 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		µg/L	200	3/12/2018 6:54:00 PM	R49721
n-Propylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
sec-Butylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Styrene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
tert-Butylbenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1,1,2-Tetrachloroethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1,2,2-Tetrachloroethane	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
Tetrachloroethene (PCE)	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
trans-1,2-DCE	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
trans-1,3-Dichloropropene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2,3-Trichlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2,4-Trichlorobenzene	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1,1-Trichloroethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,1,2-Trichloroethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Trichloroethene (TCE)	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Trichlorofluoromethane	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
1,2,3-Trichloropropane	ND	0.40		µg/L	200	3/12/2018 6:54:00 PM	R49721
Vinyl chloride	ND	0.20		µg/L	200	3/12/2018 6:54:00 PM	R49721
Xylenes, Total	ND	0.30		µg/L	200	3/12/2018 6:54:00 PM	R49721
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%Rec	200	3/12/2018 6:54:00 PM	R49721
Surr: 4-Bromofluorobenzene	78.4	70-130		%Rec	200	3/12/2018 6:54:00 PM	R49721
Surr: Dibromofluoromethane	98.1	70-130		%Rec	200	3/12/2018 6:54:00 PM	R49721
Surr: Toluene-d8	84.8	70-130		%Rec	200	3/12/2018 6:54:00 PM	R49721

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180313041
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1803601
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	180313041-001	**Sampling Date**	3/8/2018	**Date/Time Received**	3/13/2018 10:24 AM
Client Sample ID	1803601-001D / CHACO NON EXEMPT				
Matrix	Water	**Sampling Time**	10:32 AM		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	3/14/2018	RPU	SW846 CH7	
Flashpoint	>200	°F		3/19/2018 11:45:00 AM	GPB	EPA 1010	
pH	8.57	ph Units		3/14/2018 3:00:00 PM	RPU	SM 4500pH-B	
Reactive sulfide	ND	mg/L	0.2	3/22/2018 1:50:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180313041
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1803601
Attn:	ANDY FREEMAN		

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.160	mg/L	0.2	80.0	70-130	3/22/2018	3/22/2018
Cyanide (reactive)	0.538	mg/L	0.5	107.6	80-120	3/14/2018	3/14/2018

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Reactive sulfide	0.180	mg/L	0.2	90.0	11.8	0-25	3/22/2018	3/22/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180316029-001A	Reactive sulfide	ND	0.529	mg/L	0.661	80.0	70-130	3/22/2018	3/22/2018
180313041-001	Cyanide (reactive)	ND	5.08	mg/L	5	101.6	80-120	3/14/2018	3/14/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.13	mg/L	5	102.6	1.0	0-25	3/14/2018	3/14/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	3/14/2018	3/14/2018
Reactive sulfide	ND	mg/L	0.1	3/22/2018	3/22/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803601**

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608099 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.1	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.3	70	130			
Surr: Toluene-d8	8.6		10.00		85.6	70	130			

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R49721	RunNo: 49721
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608102 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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#: **1803601**

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R49721	RunNo: 49721							
Prep Date:	Analysis Date: 3/12/2018	SeqNo: 1608102	Units: µg/L						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: **1803601**

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49721**	RunNo: **49721**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608102** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		80.3	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.9	70	130			
Surr: Toluene-d8	8.7		10.00		87.3	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#: 1803601

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID lcs-36978	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614453 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	18	0.50	20.00	0	90.0	28.6	113			
1-Methylnaphthalene	19	0.50	20.00	0	95.3	27	113			
2-Methylnaphthalene	18	0.50	20.00	0	90.0	26.3	112			
Acenaphthylene	18	0.50	20.00	0	87.7	36.2	114			
Acenaphthene	18	0.50	20.00	0	89.2	35.6	116			
Fluorene	19	0.50	20.00	0	95.4	38.4	116			
Phenanthrene	20	0.50	20.00	0	97.9	42.3	118			
Anthracene	20	0.50	20.00	0	98.1	42.2	117			
Fluoranthene	21	0.50	20.00	0	106	42.5	118			
Pyrene	21	0.50	20.00	0	104	40.8	121			
Benz(a)anthracene	20	0.50	20.00	0	98.7	43	118			
Chrysene	12	0.50	20.00	0	59.2	39.4	119			
Benzo(b)fluoranthene	21	0.50	20.00	0	104	47.8	115			
Benzo(k)fluoranthene	20	0.50	20.00	0	98.2	40.5	120			
Benzo(a)pyrene	19	0.50	20.00	0	97.1	41.5	115			
Dibenz(a,h)anthracene	19	0.50	20.00	0	93.5	48.6	115			
Benzo(g,h,i)perylene	21	0.50	20.00	0	106	42	119			
Indeno(1,2,3-cd)pyrene	21	0.50	20.00	0	103	42.9	118			
Surr: N-hexadecane	69		87.60		78.9	18.7	145			
Surr: Benzo(e)pyrene	19		20.00		93.7	28.2	137			

Sample ID lcsd-36978	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 36978	RunNo: 49880
Prep Date: 3/13/2018	Analysis Date: 3/15/2018	SeqNo: 1614454 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	10	0.50	20.00	0	50.5	28.6	113	56.2	40.7	R
1-Methylnaphthalene	10	0.50	20.00	0	51.4	27	113	59.9	38.4	R
2-Methylnaphthalene	9.9	0.50	20.00	0	49.7	26.3	112	57.7	25.5	R
Acenaphthylene	11	0.50	20.00	0	56.5	36.2	114	43.3	34.1	R
Acenaphthene	11	0.50	20.00	0	56.8	35.6	116	44.4	32.1	R
Fluorene	12	0.50	20.00	0	60.1	38.4	116	45.4	28	R
Phenanthrene	13	0.50	20.00	0	64.3	42.3	118	41.4	37.4	R
Anthracene	13	0.50	20.00	0	66.2	42.2	117	38.8	36.2	R
Fluoranthene	14	0.50	20.00	0	68.9	42.5	118	42.8	26.6	R
Pyrene	13	0.50	20.00	0	64.4	40.8	121	46.8	26.8	R
Benz(a)anthracene	13	0.50	20.00	0	65.7	43	118	40.1	25.1	R
Chrysene	13	0.50	20.00	0	63.9	39.4	119	7.64	23.3	
Benzo(b)fluoranthene	14	0.50	20.00	0	68.4	47.8	115	41.5	22.5	R

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#: **1803601**

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID	lcsd-36978	SampType:	LCSD		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSS02	Batch ID:	36978		RunNo:	49880				
Prep Date:	3/13/2018	Analysis Date:	3/15/2018		SeqNo:	1614454	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	14	0.50	20.00	0	69.7	40.5	120	33.9	30.9	R
Benzo(a)pyrene	13	0.50	20.00	0	63.9	41.5	115	41.2	23.2	R
Dibenz(a,h)anthracene	14	0.50	20.00	0	68.2	48.6	115	31.3	26.5	R
Benzo(g,h,i)perylene	14	0.50	20.00	0	68.1	42	119	43.3	30.7	R
Indeno(1,2,3-cd)pyrene	14	0.50	20.00	0	68.6	42.9	118	40.0	25.4	R
Surr: N-hexadecane	32		87.60		36.8	18.7	145	0	0	
Surr: Benzo(e)pyrene	18		20.00		87.9	28.2	137	0	0	

Sample ID	mb-36978	SampType:	MBLK		TestCode:	EPA Method 8270C: PAHs				
Client ID:	PBW	Batch ID:	36978		RunNo:	49880				
Prep Date:	3/13/2018	Analysis Date:	3/15/2018		SeqNo:	1614455	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	56		87.60		63.4	18.7	145			
Surr: Benzo(e)pyrene	15		20.00		75.6	28.2	137			

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#: **1803601**

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID	MB-37099	SampType:	MBLK		TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	37099		RunNo:	49907				
Prep Date:	3/19/2018	Analysis Date:	3/19/2018		SeqNo:	1615564	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-37099	SampType:	LCS		TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	37099		RunNo:	49907				
Prep Date:	3/19/2018	Analysis Date:	3/19/2018		SeqNo:	1615579	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	91.3	80	120			

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#: 1803601

27-Mar-18

Client: Souder, Miller and Associates

Project: Chaco

Sample ID MB-37055	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617934 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-37055	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617936 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.020	0.5000	0	105	80	120			
Cadmium	0.53	0.0020	0.5000	0	106	80	120			
Chromium	0.51	0.0060	0.5000	0	103	80	120			
Lead	0.49	0.0050	0.5000	0	97.4	80	120			
Selenium	0.53	0.050	0.5000	0	106	80	120			
Silver	0.10	0.0050	0.1000	0	105	80	120			

Sample ID MB-37055	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617983 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID LCS-37055	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 37055	RunNo: 49969
Prep Date: 3/15/2018	Analysis Date: 3/21/2018	SeqNo: 1617985 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			

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: SMA-FARM | Work Order Number: 1803601 | RcptNo: 1

Received By: Isaiah Ortiz 3/10/2018 8:00:00 AM

Completed By: Anne Thorne 3/12/2018 11:09:30 AM

Reviewed By: ZMD 3/12/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1 2 (~~2~~ or ~~12~~ unless noted)

Adjusted?

Checked by: AT 03/12/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington NM 87401

Phone #: 505-325-7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
Chaco

Project #:
Chaco Non Exempt

Project Manager:
Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.0

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. 1803601	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI				Air Bubbles (Y or N)
3/8/18	10:32	Aqu	Chaco Non Exempt	Various	Various	001						X	X			X		X				

Date	Time	Relinquished by:	Received by:	Date	Time
3/9/18	1610			3/9/18	1610
3/9/18	1804			3/10/18	800

Remarks: 8260 Full List Report.
TCLP compound at TCLP Limits

Invoice Enterprise, CC: TomLong

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.

11/2/2018

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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
   New Mexico Gas Company, 7120 Wyoming Blvd, suite 20 Mail Stop BC-222 Albuquerque, NM 97109

2. **Originating Site:**
   Santa Fe 20-inch Relocation project located at 550 and Sheriff's Posse Road in Bernalillo, Bernalillo County.

3. **Location of Material (Street Address, City, State or ULSTR):**
   550 and Sheriff's Posse Road in Bernalillo, Bernalillo County.

4. **Source and Description of Waste:**
   13,000 gallons (309.52 bbls) Hydrostatic test water from newly constructed pipeline project.

   For Section 5. Checked box Other –
   Analytical report P810118 Envirotech2_v15 FINAL 110118 1154.pdf

   Estimated Volume 309.52 yd³ (bbls) Known Volume (to be entered by the operator at the end of the haul) 330 yd³ / (bbls)

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, James Lloyd James Lloyd, representative or authorized agent for New Mexico Gas Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☒ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
   C&J Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☑ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☑ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 11/3/2018

SIGNATURE: Travis Gibson TELEPHONE NO.: (505) 307-6974

Surface Waste Management Facility Authorized Agent

11/2/18

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.
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Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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3. **Location of Material (Street Address, City, State or ULSTR):**
   550 and Sheriff's Posse Road in Bernalillo, Bernalillo County.

4. **Source and Description of Waste:**
   13,000 gallons (309.52 bbls) Hydrostatic test water from newly constructed pipeline project.

   For Section 5. Checked box Other –
   Analytical report P810118 Envirotech2_v15 FINAL 110118 1154.pdf

   Estimated Volume 309.52 yd³ / (bbls) Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, James Lloyd James Lloyd, representative or authorized agent for New Mexico Gas Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☒ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
   C&J Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☑ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: New Mexico Gas Co.
Chain Of Custody Number:
Samples Received: 10/26/2018 12:50:00PM
Job Number: 09134-0005
Work Order: P810118
Project Name/Location: Santa Fe 20inch

Report Reviewed By: Walter Hinchman Date: 11/1/18

Walter Hinchman, Laboratory Director

Date: 11/1/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

New Mexico Gas Co	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Santa Fe 20inch Hydrotest 1-5	P810118-01A	Aqueous	10/25/18	10/26/18	Poly 500mL
	P810118-01B	Aqueous	10/25/18	10/26/18	Poly 500mL
	P810118-01C	Aqueous	10/25/18	10/26/18	VOA Vial, 40mL; HCl
	P810118-01D	Aqueous	10/25/18	10/26/18	VOA Vial, 40mL; HCl
	P810118-01E	Aqueous	10/25/18	10/26/18	VOA Vial, 40mL; HCl

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Analytical Laboratory

New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

Santa Fe 20inch Hydrotest 1-5
P810118-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Metals									
Arsenic	ND	0.200	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Barium	ND	2.50	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Cadmium	ND	0.100	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Chromium	ND	0.200	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Lead	ND	0.100	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Selenium	ND	0.500	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Silver	ND	0.100	mg/L	10	1844013	10/31/18	10/31/18	EPA 6010C	
Corrosivity									
pH @25°C	7.43		pH Units	1	1844007	10/30/18 08:58	10/31/18 12:15	9045D/9040 C	H1
Waste Characteristic									
Flash Point	>95		°C	1	1844014	10/31/18	10/31/18	ASTM D93-16a	
Reactivity	Negative		N/A	1	1844012	10/30/18	10/31/18	Reactivity**	
TCLP Mercury by EPA 7470A									
Mercury	ND	0.00020	mg/L	1	1844008	10/30/18	10/31/18	EPA 7470A	

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New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

TCLP Metals - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1844013 - Metals Water Hotblock Digestion EPA 3010A/200.2										
Blank (1844013-BLK1)				Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Arsenic	ND	0.0200	mg/L							
Barium	ND	0.250	"							
Cadmium	ND	0.0100	"							
Chromium	ND	0.0200	"							
Lead	ND	0.0100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.0100	"							
LCS (1844013-BS1)				Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Arsenic	0.915	0.0200	mg/L	1.00		91.5	80-120			
Barium	25.9	0.250	"	25.0		104	80-120			
Cadmium	0.908	0.0100	"	1.00		90.8	80-120			
Chromium	1.06	0.0200	"	1.00		106	80-120			
Lead	1.01	0.0100	"	1.00		101	80-120			
Selenium	0.975	0.0500	"	1.00		97.5	80-120			
Silver	0.0997	0.0100	"	0.100		99.7	80-120			
Matrix Spike (1844013-MS1)		Source: P810119-01		Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Arsenic	1.09	0.0200	mg/L	1.00	0.0655	102	75-125			
Barium	24.4	0.250	"	25.0	ND	97.7	75-125			
Cadmium	0.976	0.0100	"	1.00	ND	97.6	75-125			
Chromium	0.995	0.0200	"	1.00	ND	99.5	75-125			
Lead	1.00	0.0100	"	1.00	ND	100	75-125			
Selenium	1.02	0.0500	"	1.00	ND	102	75-125			
Silver	0.102	0.0100	"	0.100	ND	102	75-125			
Matrix Spike Dup (1844013-MSD1)		Source: P810119-01		Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Arsenic	1.11	0.0200	mg/L	1.00	0.0655	104	75-125	1.73	20	
Barium	25.1	0.250	"	25.0	ND	101	75-125	2.86	20	
Cadmium	0.989	0.0100	"	1.00	ND	98.9	75-125	1.32	20	
Chromium	1.00	0.0200	"	1.00	ND	100	75-125	0.481	20	
Lead	1.01	0.0100	"	1.00	ND	101	75-125	0.695	20	
Selenium	1.03	0.0500	"	1.00	ND	103	75-125	1.17	20	
Silver	0.103	0.0100	"	0.100	ND	103	75-125	0.684	20	

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New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

Corrosivity - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1844007 - Wet Chemistry Preparation										
LCS (1844007-BS1)				Prepared: 10/30/18 0 Analyzed: 10/31/18 1						
pH	7.99		pH Units	8.00		99.9	98.75-101.25			
Duplicate (1844007-DUP1)		Source: P810118-01		Prepared: 10/30/18 0 Analyzed: 10/31/18 1						
pH	7.46		pH Units		7.43			0.403	20	

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Analytical Laboratory

New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

Waste Characteristic - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1844014 - Wet Chemistry Preparation										
LCS (1844014-BS1)				Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Flash Point	67		°C	65.0		104	95-105			
Duplicate (1844014-DUP1)		**Source: P810118-01**		Prepared: 10/31/18 0 Analyzed: 10/31/18 1						
Flash Point	>95		°C		>95				20	

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laboratory@envirotech-inc.com

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New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

TCLP Mercury by EPA 7470A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1844008 - Mercury Water Digestion KMNO4										
Blank (1844008-BLK1)				Prepared: 10/30/18 1 Analyzed: 10/31/18 1						
Mercury	ND	0.00020	mg/L							
LCS (1844008-BS1)				Prepared: 10/30/18 1 Analyzed: 10/31/18 1						
Mercury	0.00215	0.00020	mg/L	0.00200		108	80-120			
Matrix Spike (1844008-MS1)		Source: P810118-01		Prepared: 10/30/18 1 Analyzed: 10/31/18 1						
Mercury	0.00193	0.00020	mg/L	0.00200	ND	96.7	75-125			
Matrix Spike Dup (1844008-MSD1)		Source: P810118-01		Prepared: 10/30/18 1 Analyzed: 10/31/18 1						
Mercury	0.00194	0.00020	mg/L	0.00200	ND	96.9	75-125	0.247	20	

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Analytical Laboratory

New Mexico Gas Co.	Project Name:	Santa Fe 20inch	
P.O. Box 97500	Project Number:	09134-0005	**Reported:**
Albuquerque NM, 87199-7500	Project Manager:	James Lloyd	11/01/18 11:54

Notes and Definitions

HI	Sample was received after regulatory hold-time exceeded for target analyte
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods

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Project Information | Chain of Custody | Page 1 of 1

Page 9 of 9

Client:	NMGC JAMES Lloyd
Project:	Santa Fe 20 inch
Project Manager:	Greg Crabtree
Address:	7120 Wyoming Blvd
City, State, Zip	Albuquerque NM 87109
Phone:	505-239-9971
Email:	James.Lloyd@nmgco.com

Report Attention

Report due by:	
Attention:	
Address:	
City, State, Zip	
Phone:	
Email:	

Lab Use Only

Lab WO#	Job Number
P810118	09134-0005

TAT: 1D ☐ 3D ☒

EPA Program: RCRA ☐ CWA X SDWA ☐

State: NM X | CO ☐ | UT ☐ | A ☐

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	RCP metals	RCI				Remarks
4:08	10-25	Ag	5	Santa Fe 20 inch Hydrotest 1-5	1								X	X				2-500mL poly 3-VOA, HCl

Additional Instructions: visible ice in cooler, cooler in tact. ase

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: JAMES LLoyd James E Lloyd

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
James Lloyd	10-26-18	12:50	Hanna Cha	10/26/18	12:50
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 ____ T2 ____ T3 ____
AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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Analytical Laboratory
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envirotech-inc.com
laboratory@envirotech-inc.com

Gmail **Travis Gibson <tdgibson.aguamoss@gmail.com>**

NMGC Santa Fe 20 inch Relocation

2 messages

Lloyd, James <James.Lloyd@nmgco.com> Fri, Nov 2, 2018 at 3:12 PM
To: "Tdgibsonaguamoss@gmail.com" <Tdgibsonaguamoss@gmail.com>

Hello Travis, attached are the analyticals and the C-138 for the Santa Fe 20 inch Relocation project.

James Lloyd

Sr. Environmental Scientist

James.Lloyd@nmgco.com

New Mexico Gas Company

7120 Wyoming Blvd, Suite 20

Mail Stop BC-22

Albuquerque, NM 87109

Desk: (505) 697-3438

Cell: (505) 239-9771

Fax: (505) 697-4481

New Mexico GAS COMPANY AN EMERA COMPANY

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2 attachments

P810118 Envirotech2_v15 FINAL 11 01 18 1154.pdf
654K

Scanned from a Xerox Multifunction Device.pdf
64K

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Huerfano Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL L Section 21 Township 26 North Range 10 West; 36.471831, -107.908114

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize Gandy Corporation, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Gandy Corporation, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: * Gandy Marley, Inc. 7210 E. Second Street Roswell, NM 88202; Permit # NM-711-1-0020
Address of Facility: Sec 4,5,8,9 T11S, R 31E
Method of Treatment and/or Disposal:
☒ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Travis Gibson TITLE: Foreman DATE: 11/7/2018
SIGNATURE: Electronic TELEPHONE NO.: _____

2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Middle Mesa Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL N Section 10 Township 31 North Range 7 West; 36.907568, -107.562762, San Juan County, NM

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 60 yd^3 (bbls) Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: Various Apporved Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: TRAVIS Gibson TITLE: Foreman DATE: 12/27/18
SIGNATURE: Electronic TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

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

April 19, 2016

Ashley Maxwell

Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX

RE: Middle Mesa CS

OrderNo.: 1603994

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/18/2016 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 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1603994**
Date Reported: **4/19/2016**

CLIENT: Souder, Miller and Associates
Project: Middle Mesa CS
Lab ID: 1603994-001 **Matrix:** AQUEOUS

Client Sample ID: Middle Mesa Non Exempt
Collection Date: 3/17/2016 9:39:00 AM
Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C TCLP						Analyst: **DAM**	
2-Methylphenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
3+4-Methylphenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
Phenol	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachlorobenzene	ND	0.13		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachlorobutadiene	ND	0.50		mg/L	1	3/24/2016 3:52:21 PM	24409
Hexachloroethane	ND	3.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Nitrobenzene	ND	2.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Pentachlorophenol	ND	100		mg/L	1	3/24/2016 3:52:21 PM	24409
Pyridine	ND	5.0		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/24/2016 3:52:21 PM	24409
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/24/2016 3:52:21 PM	24409
Cresols, Total	ND	200		mg/L	1	3/24/2016 3:52:21 PM	24409
Surr: 2-Fluorophenol	3.10	15-124	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: Phenol-d5	8.28	15-118	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 2,4,6-Tribromophenol	9.01	15-148	S	%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: Nitrobenzene-d5	89.1	40.6-124		%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 2-Fluorobiphenyl	80.0	35.7-128		%Rec	1	3/24/2016 3:52:21 PM	24409
Surr: 4-Terphenyl-d14	73.2	18.8-115		%Rec	1	3/24/2016 3:52:21 PM	24409
EPA METHOD 7470: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00080		mg/L	1	3/25/2016 8:10:23 AM	24421
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **MED**	
Arsenic	ND	0.20		mg/L	1	3/25/2016 1:11:34 PM	24414
Barium	ND	0.20		mg/L	1	3/25/2016 1:11:34 PM	24414
Cadmium	ND	0.020		mg/L	1	3/25/2016 1:11:34 PM	24414
Chromium	ND	0.060		mg/L	1	3/25/2016 1:11:34 PM	24414
Lead	ND	0.050		mg/L	1	3/25/2016 1:11:34 PM	24414
Selenium	ND	2.5		mg/L	5	3/25/2016 1:13:08 PM	24414
Silver	ND	0.050		mg/L	1	3/25/2016 1:11:34 PM	24414
EPA METHOD 8260B: VOLATILES						Analyst: **AG**	
Benzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Toluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Ethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025

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Qualifiers:

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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
R	RPD outside accepted recovery limits	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: Souder, Miller and Associates
Project: Middle Mesa CS
Lab ID: 1603994-001 **Matrix:** AQUEOUS

Client Sample ID: Middle Mesa Non Exempt
Collection Date: 3/17/2016 9:39:00 AM
Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: AG	
Naphthalene	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
1-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Methylnaphthalene	ND	0.80		mg/L	200	3/23/2016 3:33:24 PM	R33025
Acetone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromodichloromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromoform	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Bromomethane	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Butanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Carbon disulfide	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Carbon Tetrachloride	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloroethane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloroform	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Chloromethane	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Chlorotoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
cis-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dibromochloromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dibromomethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,4-Dichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Dichlorodifluoromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloroethene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,3-Dichloropropane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
2,2-Dichloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Hexachlorobutadiene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
2-Hexanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Isopropylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Isopropyltoluene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
4-Methyl-2-pentanone	ND	2.0		mg/L	200	3/23/2016 3:33:24 PM	R33025
Methylene Chloride	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025
n-Butylbenzene	ND	0.60		mg/L	200	3/23/2016 3:33:24 PM	R33025

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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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: Souder, Miller and Associates
Project: Middle Mesa CS
Lab ID: 1603994-001 **Matrix:** AQUEOUS

Client Sample ID: Middle Mesa Non Exempt
Collection Date: 3/17/2016 9:39:00 AM
Received Date: 3/18/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **AG**	
n-Propylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
sec-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Styrene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
tert-Butylbenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
trans-1,2-DCE	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,1-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,1,2-Trichloroethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Trichloroethene (TCE)	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Trichlorofluoromethane	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
1,2,3-Trichloropropane	ND	0.40		mg/L	200	3/23/2016 3:33:24 PM	R33025
Vinyl chloride	ND	0.20		mg/L	200	3/23/2016 3:33:24 PM	R33025
Xylenes, Total	ND	0.30		mg/L	200	3/23/2016 3:33:24 PM	R33025
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: Dibromofluoromethane	118	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025
Surr: Toluene-d8	103	70-130		%Rec	200	3/23/2016 3:33:24 PM	R33025

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Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R33025	RunNo: 33025
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013095 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R33025	RunNo: 33025
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013096 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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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
R	RPD outside accepted recovery limits	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#: 1603994

19-Apr-16

Client: Souder, Miller and Associates
Project: Middle Mesa CS

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R33025	RunNo: 33025								
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013096	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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
R	RPD outside accepted recovery limits	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#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R33025	RunNo: 33025							
Prep Date:	Analysis Date: 3/23/2016	SeqNo: 1013096	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	12		10.00		118	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	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
R	RPD outside accepted recovery limits	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#: 1603994

19-Apr-16

Client: Souder, Miller and Associates
Project: Middle Mesa CS

Sample ID mb-24409	SampType: MBLK	TestCode: EPA Method 8270C TCLP
Client ID: PBS	Batch ID: 24409	RunNo: 33040
Prep Date: 3/24/2016	Analysis Date: 3/24/2016	SeqNo: 1014302 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
Phenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.14		0.2000		71.9	15	124			
Surr: Phenol-d5	0.17		0.2000		86.2	15	118			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		78.8	15	148			
Surr: Nitrobenzene-d5	0.087		0.1000		87.3	40.6	124			
Surr: 2-Fluorobiphenyl	0.083		0.1000		83.2	35.7	128			
Surr: 4-Terphenyl-d14	0.061		0.1000		61.2	18.8	115			

Sample ID lcs-24409	SampType: LCS	TestCode: EPA Method 8270C TCLP
Client ID: LCSS	Batch ID: 24409	RunNo: 33040
Prep Date: 3/24/2016	Analysis Date: 3/24/2016	SeqNo: 1014304 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.096	0.010	0.1000	0	95.8	32.1	120			
3+4-Methylphenol	0.28	0.010	0.2000	0	138	10.9	204			
2,4-Dinitrotoluene	0.087	0.010	0.1000	0	87.2	41.9	116			
Hexachlorobenzene	0.081	0.010	0.1000	0	81.4	37.7	99.4			
Hexachlorobutadiene	0.098	0.010	0.1000	0	97.8	30.6	107			
Hexachloroethane	0.087	0.010	0.1000	0	87.3	27.4	121			
Nitrobenzene	0.090	0.010	0.1000	0	90.0	28.6	134			
Pentachlorophenol	0.080	0.010	0.1000	0	80.2	7.71	111			
Pyridine	0.075	0.010	0.1000	0	74.9	8.54	92.4			
2,4,5-Trichlorophenol	0.10	0.010	0.1000	0	103	25.3	146			
2,4,6-Trichlorophenol	0.098	0.010	0.1000	0	98.4	21.5	145			
Cresols, Total	0.37	0.010	0.3000	0	124	30	136			
Surr: 2-Fluorophenol	0.17		0.2000		84.1	15	124			
Surr: Phenol-d5	0.19		0.2000		96.8	15	118			

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
R	RPD outside accepted recovery limits	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#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID **lcs-24409** SampType: **LCS** TestCode: **EPA Method 8270C TCLP**

Client ID: **LCSS** Batch ID: **24409** RunNo: **33040**

Prep Date: **3/24/2016** Analysis Date: **3/24/2016** SeqNo: **1014304** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	0.17		0.2000		86.1	15	148			
Surr: Nitrobenzene-d5	0.10		0.1000		102	40.6	124			
Surr: 2-Fluorobiphenyl	0.094		0.1000		94.2	35.7	128			
Surr: 4-Terphenyl-d14	0.067		0.1000		66.8	18.8	115			

Sample ID **lcsd-24409** SampType: **LCSD** TestCode: **EPA Method 8270C TCLP**

Client ID: **LCSS02** Batch ID: **24409** RunNo: **33040**

Prep Date: **3/24/2016** Analysis Date: **3/24/2016** SeqNo: **1014305** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.097	0.010	0.1000	0	96.9	32.1	120	1.22	20	
3+4-Methylphenol	0.32	0.010	0.2000	0	160	10.9	204	15.0	20	
2,4-Dinitrotoluene	0.080	0.010	0.1000	0	80.2	41.9	116	8.34	20	
Hexachlorobenzene	0.088	0.010	0.1000	0	87.9	37.7	99.4	7.70	20	
Hexachlorobutadiene	0.10	0.010	0.1000	0	104	30.6	107	6.47	20	
Hexachloroethane	0.089	0.010	0.1000	0	89.0	27.4	121	1.88	20	
Nitrobenzene	0.091	0.010	0.1000	0	91.1	28.6	134	1.13	20	
Pentachlorophenol	0.084	0.010	0.1000	0	84.4	7.71	111	5.15	20	
Pyridine	0.078	0.010	0.1000	0	78.1	8.54	92.4	4.16	20	
2,4,5-Trichlorophenol	0.12	0.010	0.1000	0	115	25.3	146	11.1	20	
2,4,6-Trichlorophenol	0.10	0.010	0.1000	0	102	21.5	145	3.14	20	
Cresols, Total	0.42	0.010	0.3000	0	139	30	136	11.6	20	S
Surr: 2-Fluorophenol	0.16		0.2000		79.6	15	124	0	20	
Surr: Phenol-d5	0.19		0.2000		97.5	15	118	0	20	
Surr: 2,4,6-Tribromophenol	0.19		0.2000		93.2	15	148	0	20	
Surr: Nitrobenzene-d5	0.11		0.1000		106	40.6	124	0	20	
Surr: 2-Fluorobiphenyl	0.091		0.1000		90.7	35.7	128	0	20	
Surr: 4-Terphenyl-d14	0.068		0.1000		67.8	18.8	115	0	20	

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
R	RPD outside accepted recovery limits	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#: **1603994**

19-Apr-16

Client: Souder, Miller and Associates
Project: Middle Mesa CS

Sample ID	MB-24421	SampType:	mblk	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	24421	RunNo:	33122				
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016891	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-24421	SampType:	lcs	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	24421	RunNo:	33122				
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016892	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.7	80	120			

Sample ID	LCSD-24421	SampType:	lcsd	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSS02	Batch ID:	24421	RunNo:	33122				
Prep Date:	3/24/2016	Analysis Date:	3/25/2016	SeqNo:	1016893	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.4	80	120	1.77	20	

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
R	RPD outside accepted recovery limits	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#: 1603994

19-Apr-16

Client: Souder, Miller and Associates

Project: Middle Mesa CS

Sample ID **MB-24414** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **PBW** Batch ID: **24414** RunNo: **33073**

Prep Date: **3/24/2016** Analysis Date: **3/25/2016** SeqNo: **1014893** 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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID **LCS-24414** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **LCSW** Batch ID: **24414** RunNo: **33073**

Prep Date: **3/24/2016** Analysis Date: **3/25/2016** SeqNo: **1014894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.4	80	120			
Barium	0.48	0.020	0.5000	0	96.2	80	120			
Cadmium	0.48	0.0020	0.5000	0	95.6	80	120			
Chromium	0.48	0.0060	0.5000	0	96.0	80	120			
Lead	0.47	0.0050	0.5000	0	94.8	80	120			
Selenium	0.48	0.050	0.5000	0	96.3	80	120			
Silver	0.097	0.0050	0.1000	0	97.4	80	120			

Sample ID **LCSD-24414** SampType: **LCSD** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **LCSS02** Batch ID: **24414** RunNo: **33073**

Prep Date: **3/24/2016** Analysis Date: **3/25/2016** SeqNo: **1014895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120	0.315	20	
Barium	0.48	0.020	0.5000	0	96.1	80	120	0.164	20	
Cadmium	0.48	0.0020	0.5000	0	95.7	80	120	0.105	20	
Chromium	0.48	0.0060	0.5000	0	96.1	80	120	0.0875	20	
Lead	0.47	0.0050	0.5000	0	94.6	80	120	0.232	20	
Selenium	0.48	0.050	0.5000	0	96.8	80	120	0.480	20	
Silver	0.097	0.0050	0.1000	0	97.3	80	120	0.123	20	

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
R	RPD outside accepted recovery limits	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: SMA-FARM | Work Order Number: 1603994 | RcptNo: 1

Received by/date: AM 03/18/16

Logged By: Anne Thorne 3/18/2016 7:30:00 AM Anne Thorne

Completed By: Anne Thorne 3/18/2016 Anne Thorne

Reviewed By: 03/21/16

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?	aJ ~~Yes ☑~~	No ☑	
9. Was preservative added to bottles?	Yes ☑	~~No ☑~~ aJ	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: 1
(<2 or >12 unless noted)
Adjusted? Yes
Checked by: aJ

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: For Metals analysis: added 1 mL HNO_3 to -001c for acceptable pH

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

3/21 @ 1435 aJ

Chain-of-Custody Record

: SMA

g Address: 401 W. Broadway
Farmington NM 87401

#: 505 325-7535

or Fax#: Ashley.Maxwell@SouderMiller.com

Package:

ndard ☐ Level 4 (Full Validation)

ditation

LAP ☐ Other

D (Type)

Turn-Around Time:

☑ Standard ☐ Rush

Project Name: Middle Mesa CS

Project #:

Project Manager: Tom Long, Ashley Maxwell

Sampler: Randy Watson

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603944	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
9:39	H2O	Middle Mesa CS Non Exempt	Various	Various	001						X	X			X						

Time: 1507 Relinquished by: Randy Watson Received by: Christy Wheeler Date: 3/17/16 Time: 1507

Time: 1840 Relinquished by: Christy Wheeler Received by: [signature] Date: 03/18/16 Time: 0730

Remarks: 8260 Full List: Report TCLP Compound AT TCLP Limits.

Invoice: Enterprise
CC Tom Long

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.

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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
New Mexico Gas Company, 7120 Wyoming Blvd NE, Suite 20, Albuquerque, NM 87109

2. **Originating Site:**
DOE pipeline hydrostatic test DOE take off, San Juan County New Mexico

3. **Location of Material (Street Address, City, State or ULSTR):**
DOE take off. Nageezi, San Juan County NM. (T23N R9W Section 13a) -107.748338 36.227351 Decimal Degrees

4. **Source and Description of Waste:** Natural Gas pipeline hydrostatic test waste water (410,000 gallons)

Estimated Volume 7,455 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 10305 yd³ (bbls)

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, James Lloyd, representative or authorized agent for New Mexico Gas Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
CNJ Oilfield Services C133-523

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss Crouch Mesa Disposal Facility Permit # NM-247130

Address of Facility: Co, Rd 350 #345, Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Jeff Davis TITLE: Superintendent DATE: 8-6-18

SIGNATURE: _____ TELEPHONE NO.: 505-330-1617

Surface Waste Management Facility Authorized Agent

2018

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
District III
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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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Coastal Chemical 1130 Madison Lane, Farmington NM. 87401

2. **Originating Site:**
1130 Madison Lane Farmington NM. 87401

3. **Location of Material (Street Address, City, State or ULSTR):**
Same

4. **Source and Description of Waste:**
Rain Water, wash out hoses & totes, Teb, Gas/spec and Antifreeze

Estimated Volume _____ yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Lee Hamm, representative or authorized agent for Coastal Chemical do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☒ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
Key

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Agua Moss LLC Crouch Mesa Surface Solid #1

Address of Facility: Co Rd 350 #345

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Gabe Higgins TITLE: Sales DATE: 8-20-18

SIGNATURE: _____ TELEPHONE NO.: 505-486-9425

Surface Waste Management Facility Authorized Agent

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	**GAS/SPEC SS SELECTIVE SOLVENT INEOS MTL V#940L**
Other means of identification	
CAS number	105-59-9
Recommended use	ALL PROPER AND LEGAL PURPOSES
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Brenntag / Coastal Chemical Co., LLC
Address	3520 Veterans Memorial Drive Abbeville, LA 70510
Telephone	337-893-3862
E-mail	Not available.
Emergency phone number	800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Causes serious eye irritation.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear eye protection/face protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	100% of the mixture consists of component(s) of unknown acute oral toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
2,2'-Methyliminodiethanol		105-59-9	98 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Dry powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Yellow
Odor	Amine
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-5.8 °F (-21 °C)
Initial boiling point and boiling range	476.6 °F (247 °C)
Flash point	268.0 °F (131.1 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.76 lbs/gal
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Specific gravity	1.05

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Peroxides. Phenols.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity	Not known.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this substance.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT information on packaging may be different from that listed.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	09-01-2017
Revision date	09-01-2017
Version #	02
HMIS® ratings	Health: 2 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.
Revision information	Composition / Information on Ingredients: Disclosure Overrides

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	TRIETHYLENE GLYCOL
Other means of identification	None.
Recommended use	ALL PROPER AND LEGAL PURPOSES
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Brenntag / Coastal Chemical Co., LLC
Address	3520 Veterans Memorial Drive Abbeville, LA 70510
Telephone	337-893-3862
E-mail	Not available.
Emergency phone number	800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Specific target organ toxicity, single exposure Category 3 narcotic effects
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements



Signal word	Warning
Hazard statement	May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.
Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ETHANOL, 2,2'-[1,2-ETHANEDIYLBIS(OXY)]BIS-		112-27-6	99
ETHANOL, 2,2'-OXYBIS-		111-46-6	1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid breathing mist or vapor. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
ETHANOL, 2,2'-OXYBIS- (CAS 111-46-6)	TWA	10 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	CLEAR
Odor	ODORLESS
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	19 °F (-7.22 °C)
Initial boiling point and boiling range	544.29 °F (284.61 °C) estimated
Flash point	315.0 °F (157.2 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	654.87 °F (346.04 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	9.39 lbs/gal
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	100 % estimated

Specific gravity	1.13
VOC	100 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting.

Information on toxicological effects

Acute toxicity	Narcotic effects.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
ETHANOL, 2,2'-[1,2-ETHANEDIYLBIS(OXY)]BIS- (CAS 112-27-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	48.9 - 56 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 10000 mg/l, 96 hours
ETHANOL, 2,2'-OXYBIS- (CAS 111-46-6)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	> 32000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT information on packaging may be different from that listed.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

ETHANOL, 2,2'-[1,2-ETHANEDIYLBIS(OXY)]BIS- (CAS 112-27-6)
ETHANOL, 2,2'-OXYBIS- (CAS 111-46-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-20-2015
Revision date	03-22-2017
Version #	18
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

Revision information	This document has undergone significant changes and should be reviewed in its entirety.

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	**COASTALGUARD® EG 50**
Other means of identification	None.
Recommended use	ALL PROPER AND LEGAL PURPOSES
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Brenntag / Coastal Chemical Co., LLC
Address	3520 Veterans Memorial Drive Abbeville, LA 70510
Telephone	337-893-3862
E-mail	Not available.
Emergency phone number	800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 3
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Toxic if swallowed.
Precautionary statement	
Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Response	If exposed or concerned: Get medical advice/attention. Rinse mouth.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	99.11% of the mixture consists of component(s) of unknown acute dermal toxicity. 97.67% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,2-ETHANEDIOL		107-21-1	46.2993
NITROUS ACID, SODIUM SALT (1:1)		7632-00-0	1.44
ETHANOL, 2,2'-OXYBIS-		111-46-6	1.1398
POTASSIUM HYDROXIDE (K(OH))		1310-58-3	0.72
PHOSPHORIC ACID		7664-38-2	0.0513
BORAX (B4NA2O7.10H2O)		1303-96-4	0.0012
Other components below reportable levels			50.3484

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not taste or swallow. When using, do not eat, drink or smoke. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
PHOSPHORIC ACID (CAS 7664-38-2)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1,2-ETHANEDIOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.
BORAX (B4NA2O7.10H2O) (CAS 1303-96-4)	STEL	6 mg/m3	Inhalable fraction.
	TWA	2 mg/m3	Inhalable fraction.
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
POTASSIUM HYDROXIDE (K(OH)) (CAS 1310-58-3)	Ceiling	2 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
BORAX (B4NA2O7.10H2O) (CAS 1303-96-4)	TWA	5 mg/m3
PHOSPHORIC ACID (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3
POTASSIUM HYDROXIDE (K(OH)) (CAS 1310-58-3)	TWA	2 mg/m3

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
ETHANOL, 2,2'-OXYBIS- (CAS 111-46-6)	TWA	10 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Light green

Odor SLIGHT

Odor threshold	Not available.
pH	8 - 10
Melting point/freezing point	-29 °F (-33.89 °C)
Initial boiling point and boiling range	313.68 °F (156.49 °C) estimated
Flash point	200.0 °F (93.3 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.83 lbs/gal
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	97.67 % estimated
Specific gravity	1.06
VOC	47.44 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Toxic if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain.

Information on toxicological effects

Acute toxicity	Toxic if swallowed.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
1,2-ETHANEDIOL (CAS 107-21-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	8050 mg/l, 96 hours
ETHANOL, 2,2'-OXYBIS- (CAS 111-46-6)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	> 32000 mg/l, 96 hours
NITROUS ACID, SODIUM SALT (1:1) (CAS 7632-00-0)			
Aquatic			
Crustacea	EC50	Greasyback shrimp (Metapenaeus ensis)	16.14 - 26.61 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.15 - 0.25 mg/l, 96 hours
POTASSIUM HYDROXIDE (K(OH)) (CAS 1310-58-3)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	80 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,2-ETHANEDIOL -1.36

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (ETHYLENE GLYCOL)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
ERG number	171

DOT information on packaging may be different from that listed.

DOT



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

NITROUS ACID, SODIUM SALT (1:1) (CAS 7632-00-0) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,2-ETHANEDIOL (CAS 107-21-1)	Listed.
NITROUS ACID, SODIUM SALT (1:1) (CAS 7632-00-0)	Listed.
PHOSPHORIC ACID (CAS 7664-38-2)	Listed.
POTASSIUM HYDROXIDE (K(OH)) (CAS 1310-58-3)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2-ETHANEDIOL	107-21-1	46.2993
NITROUS ACID, SODIUM SALT (1:1)	7632-00-0	1.44

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

1,2-ETHANEDIOL (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

PHOSPHORIC ACID (CAS 7664-38-2) High priority

US state regulations WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

1,2-ETHANEDIOL (CAS 107-21-1) Listed: June 19, 2015

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2-ETHANEDIOL (CAS 107-21-1)
BORAX (B4NA2O7.10H2O) (CAS 1303-96-4)
PHOSPHORIC ACID (CAS 7664-38-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	02-16-2017
Revision date	12-13-2017
Version #	05
HMIS® ratings	Health: 2 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.
Revision information	Exposure controls/personal protection: Eye/face protection Exposure controls/personal protection: Other Physical & Chemical Properties: Multiple Properties

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Analytical Report

Report Summary

Client: Coastal Chemical

Chain Of Custody Number: 15334

Samples Received: 3/26/2013 11:08:00AM

Job Number: 95007-0025

Work Order: P303095

Project Name/Location: Coastal Chemical Plant

Entire Report Reviewed By: _____ Date: 4/4/13

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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laboratory@envirotech-inc.com

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Analytical Laboratory

Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Waste Water	P303095-01A	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01B	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01C	Aqueous	03/26/13	03/26/13	Amber, 1L
	P303095-01D	Aqueous	03/26/13	03/26/13	Poly, 500mL
	P303095-01E	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01F	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01G	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01H	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01I	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL
	P303095-01J	Aqueous	03/26/13	03/26/13	VOA Vial, 40mL

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Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

Waste Water

P303095-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Volatile Organic Compounds by 8260									
Vinyl chloride	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
2-Butanone	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,1-Dichloroethene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Chloroform	ND	0.01	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Carbon Tetrachloride	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Benzene	0.04	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,2-Dichloroethane	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Trichloroethene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Tetrachloroethene	0.01	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Chlorobenzene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
1,4-Dichlorobenzene	ND	0.005	mg/L	1	1313027	28-Mar-13	28-Mar-13	EPA 8260B	
Surrogate: Fluorobenzene		*88.2 %*	*80-120*		*1313027*	*28-Mar-13*	*28-Mar-13*	*EPA 8260B*	
Surrogate: 1,4-Difluorobenzene		*85.9 %*	*80-120*		*1313027*	*28-Mar-13*	*28-Mar-13*	*EPA 8260B*	
Surrogate: Bromochlorobenzene		*90.7 %*	*80-120*		*1313027*	*28-Mar-13*	*28-Mar-13*	*EPA 8260B*	
TCLP Base Neutrals by 8270									
Pyridine	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
1,4-Dichlorobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachloroethane	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Nitrobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachlorobutadiene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
2,4-Dinitrotoluene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Hexachlorobenzene	ND	0.01	mg/L	500	1313034	28-Mar-13	29-Mar-13	EPA 8270D	
Surrogate: 2-Fluorobiphenyl		*64.6 %*	*10-120*		*1313034*	*28-Mar-13*	*29-Mar-13*	*EPA 8270D*	

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Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

Waste Water

P303095-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TCLP Phenols by 8270									
o-Cresol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
m,p-Cresols	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
2,4,6-Trichlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
2,4,5-Trichlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
Pentachlorophenol	ND	0.01	mg/L	10	1313035	28-Mar-13	29-Mar-13	EPA 8270D	A-01
Surrogate: 2-Fluorophenol		*4.23 %*	*20-120*		*1313035*	*28-Mar-13*	*29-Mar-13*	*EPA 8270D*	*A-01, Surr2*
Surrogate: 2,4,6-Tribromophenol		*%*	*20-120*		*1313035*	*28-Mar-13*	*29-Mar-13*	*EPA 8270D*	*A-01, Surr2*
TCLP Metals									
Arsenic	0.17	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Barium	ND	0.50	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Cadmium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Chromium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Lead	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Mercury	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Selenium	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Silver	ND	0.10	mg/L	10	1313043	29-Mar-13	01-Apr-13	EPA 6010C	
Cation/Anion Analysis									
pH	9.22		pH Units	1	1313025	27-Mar-13	27-Mar-13	EPA 150.1	
Suspected Hazardous Waste									
Flash Point	>95		°C	1	1314012	01-Apr-13	01-Apr-13	ASTM D93-10a	

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Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA. 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1313027 - Purge and Trap EPA 5030A										
Blank (1313027-BLK1)			Prepared & Analyzed: 28-Mar-13							
Vinyl chloride	ND	0.005	mg/L							
2-Butanone	ND	0.005	"							
1,1-Dichloroethene	ND	0.005	"							
Chloroform	ND	0.01	"							
Carbon Tetrachloride	ND	0.005	"							
Benzene	ND	0.005	"							
1,2-Dichloroethane	ND	0.005	"							
Trichloroethene	ND	0.005	"							
Tetrachloroethene	ND	0.005	"							
Chlorobenzene	ND	0.005	"							
1,4-Dichlorobenzene	ND	0.005	"							
Surrogate: Fluorobenzene	*51.5*		*ug/L*	*50.0*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*48.4*		"	*50.0*		*96.8*	*80-120*			
Surrogate: Bromochlorobenzene	*55.5*		"	*50.0*		*111*	*80-120*			
Duplicate (1313027-DUP1)	**Source: P303095-01**		Prepared & Analyzed: 28-Mar-13							
Vinyl chloride	ND	0.005	mg/L		ND				30	
2-Butanone	ND	0.005	"		ND				30	
1,1-Dichloroethene	ND	0.005	"		ND				30	
Chloroform	ND	0.01	"		ND				30	
Carbon Tetrachloride	ND	0.005	"		ND				30	
Benzene	0.05	0.005	"		0.04			13.1	30	
1,2-Dichloroethane	ND	0.005	"		ND				30	
Trichloroethene	ND	0.005	"		ND				30	
Tetrachloroethene	0.01	0.005	"		0.01			0.417	30	
Chlorobenzene	ND	0.005	"		ND				30	
1,4-Dichlorobenzene	ND	0.005	"		ND				30	
Surrogate: Fluorobenzene	*48.3*		*ug/L*	*50.0*		*96.6*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*44.7*		"	*50.0*		*89.4*	*80-120*			
Surrogate: Bromochlorobenzene	*49.5*		"	*50.0*		*99.0*	*80-120*			
Matrix Spike (1313027-MS1)	**Source: P303095-01**		Prepared & Analyzed: 28-Mar-13							
Vinyl chloride	119		ug/L	100	ND	119	26-163			
2-Butanone	97.9		"	100	ND	97.9	43-143			
1,1-Dichloroethene	102		"	100	ND	102	47-132			
Chloroform	100		"	100	ND	100	49-133			
Carbon Tetrachloride	94.7		"	100	ND	94.7	43-143			

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Coastal Chemical	Project Name	Coastal Chemical Plant	
PO Box 820	Project Number	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager	Lee Hamm	04-Apr-13 15 32

TCLP Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1313027 - Purge and Trap EPA 5030A										
Matrix Spike (1313027-MS1)	**Source: P303095-01**			Prepared & Analyzed: 28-Mar-13						
Benzene	142		ug/L	100	40 2	102	39-150			
1,2-Dichloroethane	102		"	100	ND	102	51-147			
Trichloroethene	99 1		"	100	ND	99 1	35-146			
Tetrachloroethene	106		"	100	9.58	96.2	26-162			
Chlorobenzene	91.4		"	100	ND	91 4	38-150			
1,4-Dichlorobenzene	92.7		"	100	ND	92 7	42-143			
Surrogate: Fluorobenzene	*47 7*		"	*50 0*		*95.5*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*47 2*		"	*50.0*		*94 4*	*80-120*			
Surrogate: Bromochlorobenzene	*50.6*		"	*50.0*		*101*	*80-120*			

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Coastal Chemical	Project Name	Coastal Chemical Plant	
PO Box 820	Project Number	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager	Lee Hamm	04-Apr-13 15:32

TCLP Base Neutrals by 8270 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1313034 - Sep Funnel Liquid-Liquid Extraction EPA 3510C										
Blank (1313034-BLK1)				Prepared 28-Mar-13 Analyzed 29-Mar-13						
Pyridine	ND	0.01	mg/L							
1,4-Dichlorobenzene	ND	0.01	"							
Hexachloroethane	ND	0.01	"							
Nitrobenzene	ND	0.01	"							
Hexachlorobutadiene	ND	0.01	"							
2,4-Dinitrotoluene	ND	0.01	"							
Hexachlorobenzene	ND	0.01	"							
Surrogate: 2-Fluorobiphenyl	*85.6*		"	*222*		*38.5*	*10-120*			
Duplicate (1313034-DUP1)	**Source: P303095-01**			Prepared 28-Mar-13 Analyzed 29-Mar-13						
Pyridine	ND	0.01	mg/L		ND				200	
1,4-Dichlorobenzene	ND	0.01	"		ND				200	
Hexachloroethane	ND	0.01	"		ND				200	
Nitrobenzene	ND	0.01	"		ND				200	
Hexachlorobutadiene	ND	0.01	"		ND				200	
2,4-Dinitrotoluene	ND	0.01	"		ND				200	
Hexachlorobenzene	ND	0.01	"		ND				200	
Surrogate: 2-Fluorobiphenyl	*52.4*		"	*114*		*46.1*	*10-120*			

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Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

TCLP Phenols by 8270 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1313035 - Sep Funnel Liquid-Liquid Extraction EPA 3510C										
Blank (1313035-BLK1)				Prepared 28-Mar-13 Analyzed 29-Mar-13						
o-Cresol	ND	0.01	mg/L							
m,p-Cresols	ND	0.01	"							
2,4,6-Trichlorophenol	ND	0.01	"							
2,4,5-Trichlorophenol	ND	0.01	"							
Pentachlorophenol	ND	0.01	"							
Surrogate: 2-Fluorophenol	*46.6*		"	*100*		*46.6*	*20-120*			
Surrogate: 2,4,6-Tribromophenol	*81.5*		"	*100*		*81.5*	*20-120*			
Duplicate (1313035-DUP1)		**Source: P303095-01**		Prepared 28-Mar-13 Analyzed: 29-Mar-13						
o-Cresol	ND	0.01	mg/L		ND				30	A-01
m,p-Cresols	ND	0.01	"		ND				30	A-01
2,4,6-Trichlorophenol	ND	0.01	"		ND				30	A-01
2,4,5-Trichlorophenol	ND	0.01	"		ND				30	A-01
Pentachlorophenol	ND	0.01	"		ND				30	A-01
Surrogate: 2-Fluorophenol	*0.00*		"	*8.89*			*20-120*			*A-01, Surr2*
Surrogate: 2,4,6-Tribromophenol	*0.00*		"	*8.89*			*20-120*			*A-01, Surr2*

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Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

TCLP Metals - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1313043 - Metal Water/TCLP Digestion EPA 3015A										
Blank (1313043-BLK1)				Prepared: 29-Mar-13 Analyzed: 01-Apr-13						
Arsenic	ND	0.01	mg/L							
Barium	ND	0.05	"							
Cadmium	ND	0.01	"							
Chromium	ND	0.01	"							
Lead	ND	0.01	"							
Mercury	ND	0.01	"							
Selenium	ND	0.01	"							
Silver	ND	0.01	"							
Duplicate (1313043-DUP1)	Source: P303095-01			Prepared: 29-Mar-13 Analyzed: 01-Apr-13						
Arsenic	ND	0.01	mg/L		0.17				30	
Barium	ND	0.05	"		ND				30	
Cadmium	ND	0.01	"		ND				30	
Chromium	ND	0.01	"		ND				30	
Lead	ND	0.01	"		ND				30	
Mercury	ND	0.01	"		ND				30	
Selenium	0.01	0.01	"		ND				30	
Silver	ND	0.01	"		ND				30	
Matrix Spike (1313043-MS1)	Source: P303095-01			Prepared: 29-Mar-13 Analyzed: 01-Apr-13						
Arsenic	33.0	1.00	mg/L	27.8	0.17	118	75-125			
Barium	485	5.00	"	556	ND	87.3	75-125			
Cadmium	27.4	1.00	"	27.8	ND	98.8	75-125			
Chromium	48.5	1.00	"	55.6	ND	87.4	75-125			
Lead	52.9	1.00	"	55.6	ND	95.2	75-125			
Mercury	10.1	1.00	"	11.1	ND	90.8	75-125			
Selenium	12.3	1.00	"	11.1	ND	111	75-125			
Silver	10.7	1.00	"	11.1	ND	95.9	75-125			

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envirotech
Analytical Laboratory

Coastal Chemical	Project Name:	Coastal Chemical Plant	
PO Box 820	Project Number:	95007-0025	Reported:
Abbeville LA, 70511-0820	Project Manager:	Lee Hamm	04-Apr-13 15:32

Notes and Definitions

Surr2	Surrogate recovery was below acceptable limits
FPI	>95
A-01	Unable to concentrate sample to desired volume
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Est. 1970

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

Report Summary

Thursday April 04, 2013

Report Number: L627434
Samples Received: 03/28/13
Client Project: 95007-0025

Description: Coastal Chemical Plant

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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REPORT OF ANALYSIS

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

April 04, 2013

Date Received : March 28, 2013
Description : Coastal Chemical Plant
Sample ID : WASTE WATER-P303095-01

ESC Sample # : L627434-01
Site ID : 095-01
Project # : 95007-0025

Collected By :
Collection Date : 03/26/13 09:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/l	9012B	04/04/13	1
Reactive Sulf.(SW846 7.3.4.1)	BDL	25.	mg/l	9034/9030B	04/02/13	1
Methanol	140	4.0	mg/l	8015M	03/29/13	200
Ethanol	8.6	5.0	mg/l	8015M	03/29/13	50
Volatile Organics						
Acetone	BDL	5.0	mg/l	8260B	03/30/13	100
Acrolein	BDL	5.0	mg/l	8260B	03/30/13	100
Acrylonitrile	BDL	1.0	mg/l	8260B	03/30/13	100
Benzene	BDL	0.10	mg/l	8260B	03/30/13	100
Bromodichloromethane	BDL	0.10	mg/l	8260B	03/30/13	100
Bromoform	BDL	0.10	mg/l	8260B	03/30/13	100
Bromomethane	BDL	0.50	mg/l	8260B	03/30/13	100
Carbon disulfide	BDL	0.10	mg/l	8260B	03/30/13	100
Carbon tetrachloride	BDL	0.10	mg/l	8260B	03/30/13	100
Chlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
Chlorodibromomethane	BDL	0.10	mg/l	8260B	03/30/13	100
Chloroethane	BDL	0.50	mg/l	8260B	03/30/13	100
Chloroform	BDL	0.50	mg/l	8260B	03/30/13	100
Chloromethane	BDL	0.25	mg/l	8260B	03/30/13	100
1,2-Dibromoethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dibromo-3-Chloropropane	BDL	0.50	mg/l	8260B	03/30/13	100
Dibromomethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
1,3-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
1,4-Dichlorobenzene	BDL	0.10	mg/l	8260B	03/30/13	100
Dichlorodifluoromethane	BDL	0.50	mg/l	8260B	03/30/13	100
1,1-Dichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
cis-1,2-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
trans-1,2-Dichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
1,2-Dichloropropane	BDL	0.10	mg/l	8260B	03/30/13	100
cis-1,3-Dichloropropene	BDL	0.10	mg/l	8260B	03/30/13	100
trans-1,3-Dichloropropene	BDL	0.10	mg/l	8260B	03/30/13	100
Ethylbenzene	1.7	0.10	mg/l	8260B	03/30/13	100
2-Hexanone	BDL	1.0	mg/l	8260B	03/30/13	100
Iodomethane	BDL	1.0	mg/l	8260B	03/30/13	100
2-Butanone (MEK)	BDL	1.0	mg/l	8260B	03/30/13	100
Methylene Chloride	BDL	0.50	mg/l	8260B	03/30/13	100
4-Methyl-2-pentanone (MIBK)	BDL	1.0	mg/l	8260B	03/30/13	100
Pentachloroethane	BDL	0.50	mg/l	8260B	03/30/13	100

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Lynn Berry
EnviroTech- NM
5796 US. Highway 64
Farmington, NM 87401

April 04, 2013

ESC Sample # : L627434-01

Site ID : 095-01

Project # : 95007-0025

Date Received : March 28, 2013
Description : Coastal Chemical Plant
Sample ID : WASTE WATER-P303095-01

Collected By :
Collection Date : 03/26/13 09:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Styrene	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,2,2-Tetrachloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,1,2-Tetrachloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
Tetrachloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
Toluene	2.3	0.50	mg/l	8260B	03/30/13	100
1,1,1-Trichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
1,1,2-Trichloroethane	BDL	0.10	mg/l	8260B	03/30/13	100
Trichloroethene	BDL	0.10	mg/l	8260B	03/30/13	100
Trichlorofluoromethane	BDL	0.50	mg/l	8260B	03/30/13	100
1,2,3-Trichloropropane	BDL	0.25	mg/l	8260B	03/30/13	100
Vinyl acetate	BDL	1.0	mg/l	8260B	03/30/13	100
Vinyl chloride	BDL	0.10	mg/l	8260B	03/30/13	100
Xylenes, Total	13.	0.30	mg/l	8260B	03/30/13	100
Acetonitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Allyl chloride	BDL	0.50	mg/l	8260B	03/30/13	100
Chloroprene	BDL	5.0	mg/l	8260B	03/30/13	100
trans-1,4-Dichloro-2-butene	BDL	0.25	mg/l	8260B	03/30/13	100
Isobutanol	BDL	10.	mg/l	8260B	03/30/13	100
1,4-Dioxane	BDL	10.	mg/l	8260B	04/01/13	100
Methacrylonitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Methyl methacrylate	BDL	0.50	mg/l	8260B	03/30/13	100
Ethyl methacrylate	BDL	0.50	mg/l	8260B	03/30/13	100
Propionitrile	BDL	5.0	mg/l	8260B	03/30/13	100
Surrogate Recovery						
Toluene-d8	96.8		% Rec.	8260B	03/30/13	100
Dibromofluoromethane	106.		% Rec.	8260B	03/30/13	100
a,a,a-Trifluorotoluene	105.		% Rec.	8260B	03/30/13	100
4-Bromofluorobenzene	99.4		% Rec.	8260B	03/30/13	100
Volatile Organics						
2-propanol	6.3	2.5	mg/l	8260B	04/02/13	100
Surrogate Recovery						

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 04/04/13 15:32 Printed: 04/04/13 15:46

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L627434-01	WG653691	SAMP	1,2-Dibromo-3-Chloropropane	R2600338	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Lynn Berry
5796 US. Highway 64

Farmington, NM 87401

Quality Assurance Report
Level II

L627434

April 04, 2013

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,1-Trichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1,2-Trichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1-Dichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,1-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
1,2,3-Trichloropropane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG653691	03/30/13 12:08
1,2-Dibromoethane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichloroethane	< .001	mg/l			WG653691	03/30/13 12:08
1,2-Dichloropropane	< .001	mg/l			WG653691	03/30/13 12:08
1,3-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
1,4-Dichlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
2-Butanone (MEK)	< .01	mg/l			WG653691	03/30/13 12:08
2-Hexanone	< .01	mg/l			WG653691	03/30/13 12:08
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG653691	03/30/13 12:08
Acetone	< .05	mg/l			WG653691	03/30/13 12:08
Acetonitrile	< .05	mg/l			WG653691	03/30/13 12:08
Acrolein	< .025	mg/l			WG653691	03/30/13 12:08
Acrylonitrile	< .01	mg/l			WG653691	03/30/13 12:08
Allyl chloride	< .005	mg/l			WG653691	03/30/13 12:08
Benzene	< .001	mg/l			WG653691	03/30/13 12:08
Bromodichloromethane	< .001	mg/l			WG653691	03/30/13 12:08
Bromoform	< .001	mg/l			WG653691	03/30/13 12:08
Bromomethane	< .005	mg/l			WG653691	03/30/13 12:08
Carbon disulfide	< .001	mg/l			WG653691	03/30/13 12:08
Carbon tetrachloride	< .001	mg/l			WG653691	03/30/13 12:08
Chlorobenzene	< .001	mg/l			WG653691	03/30/13 12:08
Chlorodibromomethane	< .001	mg/l			WG653691	03/30/13 12:08
Chloroethane	< .005	mg/l			WG653691	03/30/13 12:08
Chloroform	< .005	mg/l			WG653691	03/30/13 12:08
Chloromethane	< .0025	mg/l			WG653691	03/30/13 12:08
Chloroprene	< .05	mg/l			WG653691	03/30/13 12:08
cis-1,2-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
cis-1,3-Dichloropropene	< .001	mg/l			WG653691	03/30/13 12:08
Dibromomethane	< .001	mg/l			WG653691	03/30/13 12:08
Dichlorodifluoromethane	< .005	mg/l			WG653691	03/30/13 12:08
Ethyl methacrylate	< .005	mg/l			WG653691	03/30/13 12:08
Ethylbenzene	< .001	mg/l			WG653691	03/30/13 12:08
Iodomethane	< .01	mg/l			WG653691	03/30/13 12:08
Isobutanol	< .1	mg/l			WG653691	03/30/13 12:08
Methacrylonitrile	< .05	mg/l			WG653691	03/30/13 12:08
Methyl methacrylate	< .005	mg/l			WG653691	03/30/13 12:08
Methylene Chloride	< .005	mg/l			WG653691	03/30/13 12:08
Pentachloroethane	< .005	mg/l			WG653691	03/30/13 12:08
Propionitrile	< .05	mg/l			WG653691	03/30/13 12:08
Styrene	< .001	mg/l			WG653691	03/30/13 12:08
Tetrachloroethene	< .001	mg/l			WG653691	03/30/13 12:08
Toluene	< .005	mg/l			WG653691	03/30/13 12:08
trans-1,2-Dichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
trans-1,3-Dichloropropene	< .001	mg/l			WG653691	03/30/13 12:08
trans-1,4-Dichloro-2-butene	< .0025	mg/l			WG653691	03/30/13 12:08
Trichloroethene	< .001	mg/l			WG653691	03/30/13 12:08
Trichlorofluoromethane	< .005	mg/l			WG653691	03/30/13 12:08
Vinyl acetate	< .01	mg/l			WG653691	03/30/13 12:08
Vinyl chloride	< .001	mg/l			WG653691	03/30/13 12:08
Xylenes, Total	< .003	mg/l			WG653691	03/30/13 12:08
4-Bromofluorobenzene		% Rec.	98.44	82-120	WG653691	03/30/13 12:08

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Lynn Berry
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Farmington, NM 87401

Quality Assurance Report
Level II

L627434

April 04, 2013

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Dibromofluoromethane		% Rec.	97.22	82-126		03/30/13 12:08
Toluene-d8		% Rec.	93.24	92-112		03/30/13 12:08
a,a,a-Trifluorotoluene		% Rec.	100.3	90-116		03/30/13 12:08
Ethanol	< .1	mg/l			WG653575	03/29/13 10:45
Methanol	< .02	mg/l			WG653575	03/29/13 10:45
Reactive Sulf.(SW846 7.3.4.1)	< 25	mg/l			WG654165	04/02/13 15:26
Reactive CN (SW846 7.3.3.2)	< .125	mg/l			WG654167	04/04/13 13:19

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Reactive Sulf.(SW846 7.3.4.1)	mg/l	0	0	0	20	L627434-01	WG654165
Reactive CN (SW846 7.3.3.2)	mg/l	0	0	0	20	L627434-01	WG654167

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0257	103.	77-128	WG653691
1,1,1-Trichloroethane	mg/l	.025	0.0260	104.	71-126	WG653691
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0261	105.	78-130	WG653691
1,1,2-Trichloroethane	mg/l	.025	0.0246	98.2	81-121	WG653691
1,1-Dichloroethane	mg/l	.025	0.0232	92.9	73-123	WG653691
1,1-Dichloroethene	mg/l	.025	0.0268	107.	54-134	WG653691
1,2,3-Trichloropropane	mg/l	.025	0.0238	95.1	68-130	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0272	109.	55-142	WG653691
1,2-Dibromoethane	mg/l	.025	0.0261	104.	78-124	WG653691
1,2-Dichlorobenzene	mg/l	.025	0.0245	97.9	82-121	WG653691
1,2-Dichloroethane	mg/l	.025	0.0242	96.8	69-128	WG653691
1,2-Dichloropropane	mg/l	.025	0.0229	91.7	77-121	WG653691
1,3-Dichlorobenzene	mg/l	.025	0.0250	99.9	77-127	WG653691
1,4-Dichlorobenzene	mg/l	.025	0.0239	95.5	79-117	WG653691
2-Butanone (MEK)	mg/l	.125	0.0891	71.3	58-144	WG653691
2-Hexanone	mg/l	.125	0.113	90.3	62-144	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.121	96.9	58-147	WG653691
Acetone	mg/l	.125	0.0785	62.8	49-153	WG653691
Acrolein	mg/l	.125	0.204	163.	10-181	WG653691
Acrylonitrile	mg/l	.125	0.128	102.	53-153	WG653691
Benzene	mg/l	.025	0.0242	96.6	72-119	WG653691
Bromodichloromethane	mg/l	.025	0.0242	96.8	75-127	WG653691
Bromoform	mg/l	.025	0.0264	106.	61-136	WG653691
Bromomethane	mg/l	.025	0.0360	144.	42-172	WG653691
Carbon disulfide	mg/l	.025	0.0252	101.	19-150	WG653691
Carbon tetrachloride	mg/l	.025	0.0272	109.	63-129	WG653691
Chlorobenzene	mg/l	.025	0.0248	99.3	78-123	WG653691
Chlorodibromomethane	mg/l	.025	0.0251	100.	73-128	WG653691
Chloroethane	mg/l	.025	0.0304	122.	52-164	WG653691
Chloroform	mg/l	.025	0.0253	101.	76-122	WG653691
Chloromethane	mg/l	.025	0.0230	92.0	50-141	WG653691
cis-1,2-Dichloroethene	mg/l	.025	0.0252	101.	75-121	WG653691
cis-1,3-Dichloropropene	mg/l	.025	0.0236	94.4	74-124	WG653691
Dibromomethane	mg/l	.025	0.0250	100.	77-124	WG653691
Dichlorodifluoromethane	mg/l	.025	0.0290	116.	33-173	WG653691
Ethylbenzene	mg/l	.025	0.0252	101.	77-124	WG653691

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Quality Assurance Report
Level II

L627434

April 04, 2013

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Iodomethane	mg/l	.125	0.129	103.	54-139	WG653691
Methylene Chloride	mg/l	.025	0.0228	91.3	67-122	WG653691
Styrene	mg/l	.025	0.0249	99.6	69-145	WG653691
Tetrachloroethene	mg/l	.025	0.0270	108.	69-131	WG653691
Toluene	mg/l	.025	0.0237	94.7	75-114	WG653691
trans-1,2-Dichloroethene	mg/l	.025	0.0247	98.9	63-127	WG653691
trans-1,3-Dichloropropene	mg/l	.025	0.0254	102.	69-124	WG653691
trans-1,4-Dichloro-2-butene	mg/l	.025	0.0243	97.0	58-137	WG653691
Trichloroethene	mg/l	.025	0.0252	101.	69-131	WG653691
Trichlorofluoromethane	mg/l	.025	0.0315	126.	53-161	WG653691
Vinyl acetate	mg/l	.125	0.115	92.4	47-161	WG653691
Vinyl chloride	mg/l	.025	0.0255	102.	55-142	WG653691
Xylenes, Total	mg/l	.075	0.0757	101.	77-123	WG653691
4-Bromofluorobenzene				98.69	82-120	WG653691
Dibromofluoromethane				103.3	82-126	WG653691
Toluene-d8				97.76	92-112	WG653691
a,a,a-Trifluorotoluene				103.6	90-116	WG653691
Ethanol	mg/l	.5	0.494	98.7	70-130	WG653575
Methanol	mg/l	.5	0.455	90.9	70-130	WG653575
Reactive Sulf.(SW846 7.3.4.1)	mg/l	100	95.0	95.0	70-130	WG654165

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0263	0.0257	105.	77-128	2.52	20	WG653691
1,1,1-Trichloroethane	mg/l	0.0235	0.0260	94.0	71-126	10.3	20	WG653691
1,1,2,2-Tetrachloroethane	mg/l	0.0260	0.0261	104.	78-130	0.540	20	WG653691
1,1,2-Trichloroethane	mg/l	0.0248	0.0246	99.0	81-121	0.840	20	WG653691
1,1-Dichloroethane	mg/l	0.0238	0.0232	95.0	73-123	2.29	20	WG653691
1,1-Dichloroethene	mg/l	0.0273	0.0268	109.	54-134	1.85	20	WG653691
1,2,3-Trichloropropane	mg/l	0.0232	0.0238	93.0	68-130	2.56	20	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	0.0259	0.0272	104.	55-142	5.03	20	WG653691
1,2-Dibromoethane	mg/l	0.0256	0.0261	102.	78-124	1.61	20	WG653691
1,2-Dichlorobenzene	mg/l	0.0244	0.0245	98.0	82-121	0.310	20	WG653691
1,2-Dichloroethane	mg/l	0.0221	0.0242	88.0	69-128	9.01	20	WG653691
1,2-Dichloropropane	mg/l	0.0231	0.0229	92.0	77-121	0.570	20	WG653691
1,3-Dichlorobenzene	mg/l	0.0255	0.0250	102.	77-127	2.12	20	WG653691
1,4-Dichlorobenzene	mg/l	0.0235	0.0239	94.0	79-117	1.74	20	WG653691
2-Butanone (MEK)	mg/l	0.0827	0.0891	66.0	58-144	7.43	20	WG653691
2-Hexanone	mg/l	0.115	0.113	92.0	62-144	1.77	20	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	0.121	0.121	97.0	58-147	0.210	20	WG653691
Acetone	mg/l	0.0750	0.0785	60.0	49-153	4.53	21	WG653691
Acrolein	mg/l	0.195	0.204	156.	10-181	4.04	30	WG653691
Acrylonitrile	mg/l	0.124	0.128	99.0	53-153	3.11	20	WG653691
Benzene	mg/l	0.0229	0.0242	91.0	72-119	5.51	20	WG653691
Bromodichloromethane	mg/l	0.0247	0.0242	99.0	75-127	2.07	20	WG653691
Bromoform	mg/l	0.0257	0.0264	103.	61-136	2.88	20	WG653691
Bromomethane	mg/l	0.0358	0.0360	143.	42-172	0.650	20	WG653691
Carbon disulfide	mg/l	0.0252	0.0252	101.	19-150	0.120	20	WG653691
Carbon tetrachloride	mg/l	0.0246	0.0272	98.0	63-129	10.1	20	WG653691
Chlorobenzene	mg/l	0.0254	0.0248	101.	78-123	2.18	20	WG653691
Chlorodibromomethane	mg/l	0.0257	0.0251	103.	73-128	2.54	20	WG653691
Chloroethane	mg/l	0.0323	0.0304	129.	52-164	6.01	20	WG653691
Chloroform	mg/l	0.0235	0.0253	94.0	76-122	7.24	20	WG653691
Chloromethane	mg/l	0.0254	0.0230	102.	50-141	10.0	20	WG653691

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Quality Assurance Report
Level II

L627434

April 04, 2013

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
cis-1,2-Dichloroethene	mg/l	0.0240	0.0252	96.0	75-121	5.17	20	WG653691
cis-1,3-Dichloropropene	mg/l	0.0237	0.0236	95.0	74-124	0.550	20	WG653691
Dibromomethane	mg/l	0.0242	0.0250	97.0	77-124	3.15	20	WG653691
Dichlorodifluoromethane	mg/l	0.0315	0.0290	126.	33-173	8.15	20	WG653691
Ethylbenzene	mg/l	0.0253	0.0252	101.	77-124	0.190	20	WG653691
Iodomethane	mg/l	0.129	0.129	103.	54-139	0.110	20	WG653691
Methylene Chloride	mg/l	0.0235	0.0228	94.0	67-122	2.68	20	WG653691
Styrene	mg/l	0.0253	0.0249	101.	69-145	1.69	20	WG653691
Tetrachloroethene	mg/l	0.0273	0.0270	109.	69-131	1.11	20	WG653691
Toluene	mg/l	0.0237	0.0237	95.0	75-114	0.0100	20	WG653691
trans-1,2-Dichloroethene	mg/l	0.0246	0.0247	98.0	63-127	0.540	20	WG653691
trans-1,3-Dichloropropene	mg/l	0.0247	0.0254	99.0	69-124	3.07	20	WG653691
trans-1,4-Dichloro-2-butene	mg/l	0.0219	0.0243	88.0	58-137	10.1	20	WG653691
Trichloroethene	mg/l	0.0249	0.0252	100.	69-131	1.23	20	WG653691
Trichlorofluoromethane	mg/l	0.0323	0.0315	129.	53-161	2.72	20	WG653691
Vinyl acetate	mg/l	0.103	0.115	82.0	47-161	11.2	20	WG653691
Vinyl chloride	mg/l	0.0287	0.0255	115.	55-142	11.7	20	WG653691
Xylenes, Total	mg/l	0.0760	0.0757	101.	77-123	0.480	20	WG653691
4-Bromofluorobenzene				99.41	82-120			WG653691
Dibromofluoromethane				97.20	82-126			WG653691
Toluene-d8				98.91	92-112			WG653691
a,a,a-Trifluorotoluene				103.1	90-116			WG653691
Ethanol	mg/l	0.499	0.494	100.	70-130	0.970	20	WG653575
Methanol	mg/l	0.456	0.455	91.0	70-130	0.320	20	WG653575
Reactive Sulf.(SW846 7.3.4.1)	mg/l	110.	95.0	110.	70-130	14.6	20	WG654165

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	2.48	0	.025	99.1	71-130	L627434-01	WG653691
1,1,1-Trichloroethane	mg/l	2.39	0	.025	95.5	58-137	L627434-01	WG653691
1,1,2,2-Tetrachloroethane	mg/l	2.17	0	.025	86.7	64-149	L627434-01	WG653691
1,1,2-Trichloroethane	mg/l	2.21	0	.025	88.3	73-128	L627434-01	WG653691
1,1-Dichloroethane	mg/l	2.33	0	.025	93.3	58-133	L627434-01	WG653691
1,1-Dichloroethene	mg/l	2.67	0	.025	107.	32-152	L627434-01	WG653691
1,2,3-Trichloropropane	mg/l	2.02	0	.025	80.6	74-137	L627434-01	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	2.15	0	.025	86.0	55-148	L627434-01	WG653691
1,2-Dibromoethane	mg/l	2.30	0	.025	92.0	71-129	L627434-01	WG653691
1,2-Dichlorobenzene	mg/l	2.35	0	.025	94.2	75-125	L627434-01	WG653691
1,2-Dichloroethane	mg/l	1.94	0	.025	77.5	59-135	L627434-01	WG653691
1,2-Dichloropropane	mg/l	2.11	0	.025	84.5	68-126	L627434-01	WG653691
1,3-Dichlorobenzene	mg/l	2.53	0	.025	101.	69-131	L627434-01	WG653691
1,4-Dichlorobenzene	mg/l	2.33	0	.025	93.2	70-123	L627434-01	WG653691
2-Butanone (MEK)	mg/l	9.02	0	.125	72.2	51-149	L627434-01	WG653691
2-Hexanone	mg/l	11.8	0	.125	94.4	58-148	L627434-01	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	10.6	0	.125	84.6	53-154	L627434-01	WG653691
Acetone	mg/l	8.80	0.335	.125	67.7	34-146	L627434-01	WG653691
Acrolein	mg/l	13.4	0	.125	107.	10-189	L627434-01	WG653691
Acrylonitrile	mg/l	9.56	0	.125	76.4	49-162	L627434-01	WG653691
Benzene	mg/l	2.23	0.0402	.025	87.6	51-134	L627434-01	WG653691
Bromodichloromethane	mg/l	2.13	0	.025	85.2	67-132	L627434-01	WG653691
Bromoform	mg/l	2.26	0	.025	90.4	59-137	L627434-01	WG653691
Bromomethane	mg/l	3.70	0	.025	148.	23-177	L627434-01	WG653691
Carbon disulfide	mg/l	2.75	0	.025	110.	10-165	L627434-01	WG653691
Carbon tetrachloride	mg/l	2.48	0	.025	99.2	49-140	L627434-01	WG653691

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Quality Assurance Report
Level II

L627434

April 04, 2013

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chlorobenzene	mg/l	2.50	0	.025	99.9	69-126	L627434-01	WG653691
Chlorodibromomethane	mg/l	2.32	0	.025	92.7	68-130	L627434-01	WG653691
Chloroethane	mg/l	3.07	0	.025	123.	32-177	L627434-01	WG653691
Chloroform	mg/l	2.26	0.0130	.025	90.1	64-130	L627434-01	WG653691
Chloromethane	mg/l	2.52	0	.025	101.	27-155	L627434-01	WG653691
cis-1,2-Dichloroethene	mg/l	2.25	0	.025	89.8	54-137	L627434-01	WG653691
cis-1,3-Dichloropropene	mg/l	2.16	0	.025	86.3	63-127	L627434-01	WG653691
Dibromomethane	mg/l	2.09	0	.025	83.6	68-131	L627434-01	WG653691
Dichlorodifluoromethane	mg/l	3.36	0	.025	134.	16-188	L627434-01	WG653691
Ethylbenzene	mg/l	4.51	1.66	.025	114.	64-135	L627434-01	WG653691
Iodomethane	mg/l	10.9	0	.125	86.9	38-149	L627434-01	WG653691
Methylene Chloride	mg/l	2.17	0.102	.025	82.6	52-130	L627434-01	WG653691
Styrene	mg/l	2.69	0	.025	108.	58-152	L627434-01	WG653691
Tetrachloroethene	mg/l	2.68	0	.025	107.	56-139	L627434-01	WG653691
Toluene	mg/l	4.93	2.33	.025	104.	61-126	L627434-01	WG653691
trans-1,2-Dichloroethene	mg/l	2.42	0	.025	96.9	45-137	L627434-01	WG653691
trans-1,3-Dichloropropene	mg/l	2.17	0	.025	86.8	59-130	L627434-01	WG653691
trans-1,4-Dichloro-2-butene	mg/l	1.92	0	.025	76.7	51-145	L627434-01	WG653691
Trichloroethene	mg/l	2.34	0	.025	93.4	40-155	L627434-01	WG653691
Trichlorofluoromethane	mg/l	3.35	0	.025	134.	35-177	L627434-01	WG653691
Vinyl acetate	mg/l	10.3	0	.125	82.5	36-186	L627434-01	WG653691
Vinyl chloride	mg/l	2.87	0	.025	115.	32-159	L627434-01	WG653691
Xylenes, Total	mg/l	21.8	12.7	.075	122.	64-133	L627434-01	WG653691
4-Bromofluorobenzene					100.6	82-120		WG653691
Dibromofluoromethane					94.49	82-126		WG653691
Toluene-d8					97.19	92-112		WG653691
a,a,a-Trifluorotoluene					102.6	90-116		WG653691
Ethanol	mg/l	0.560	0.0434	.5	103.	70-130	L626347-05	WG653575
Methanol	mg/l	0.499	0	.5	99.7	70-130	L626347-05	WG653575

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	2.64	2.48	105.	71-130	6.23	20	L627434-01	WG653691
1,1,1-Trichloroethane	mg/l	2.40	2.39	95.8	58-137	0.340	20	L627434-01	WG653691
1,1,2,2-Tetrachloroethane	mg/l	2.49	2.17	99.8	64-149	14.0	20	L627434-01	WG653691
1,1,2-Trichloroethane	mg/l	2.49	2.21	99.6	73-128	12.0	20	L627434-01	WG653691
1,1-Dichloroethane	mg/l	2.28	2.33	91.2	58-133	2.33	20	L627434-01	WG653691
1,1-Dichloroethene	mg/l	2.83	2.67	113.	32-152	5.65	20	L627434-01	WG653691
1,2,3-Trichloropropane	mg/l	2.29	2.02	91.5	74-137	12.7	20	L627434-01	WG653691
1,2-Dibromo-3-Chloropropane	mg/l	2.71	2.15	108.	55-148	23.0*	22	L627434-01	WG653691
1,2-Dibromoethane	mg/l	2.52	2.30	101.	71-129	9.13	20	L627434-01	WG653691
1,2-Dichlorobenzene	mg/l	2.51	2.35	100.	75-125	6.49	20	L627434-01	WG653691
1,2-Dichloroethane	mg/l	2.20	1.94	87.9	59-135	12.7	20	L627434-01	WG653691
1,2-Dichloropropane	mg/l	2.29	2.11	91.7	68-126	8.17	20	L627434-01	WG653691
1,3-Dichlorobenzene	mg/l	2.61	2.53	104.	69-131	3.01	20	L627434-01	WG653691
1,4-Dichlorobenzene	mg/l	2.46	2.33	98.5	70-123	5.55	20	L627434-01	WG653691
2-Butanone (MEK)	mg/l	11.1	9.02	88.8	51-149	20.7	22	L627434-01	WG653691
2-Hexanone	mg/l	13.3	11.8	106.	58-148	12.1	24	L627434-01	WG653691
4-Methyl-2-pentanone (MIBK)	mg/l	12.7	10.6	101.	53-154	17.9	21	L627434-01	WG653691
Acetone	mg/l	9.46	8.80	73.0	34-146	7.21	22	L627434-01	WG653691
Acrolein	mg/l	14.1	13.4	113.	10-189	4.89	30	L627434-01	WG653691
Acrylonitrile	mg/l	11.1	9.56	88.7	49-162	14.8	20	L627434-01	WG653691
Benzene	mg/l	2.32	2.23	91.3	51-134	4.07	20	L627434-01	WG653691
Bromodichloromethane	mg/l	2.34	2.13	93.7	67-132	9.47	20	L627434-01	WG653691
Bromoform	mg/l	2.53	2.26	101.	59-137	11.4	20	L627434-01	WG653691
Bromomethane	mg/l	3.68	3.70	147.	23-177	0.420	21	L627434-01	WG653691

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April 04, 2013

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Carbon disulfide	mg/l	2.90	2.75	116.	10-165	5.20	22	L627434-01	WG653691
Carbon tetrachloride	mg/l	2.51	2.48	100.	49-140	1.29	20	L627434-01	WG653691
Chlorobenzene	mg/l	2.56	2.50	102.	69-126	2.28	20	L627434-01	WG653691
Chlorodibromomethane	mg/l	2.55	2.32	102.	68-130	9.56	20	L627434-01	WG653691
Chloroethane	mg/l	3.15	3.07	126.	32-177	2.46	21	L627434-01	WG653691
Chloroform	mg/l	2.39	2.26	95.0	64-130	5.33	20	L627434-01	WG653691
Chloromethane	mg/l	2.62	2.52	105.	27-155	3.96	20	L627434-01	WG653691
cis-1,2-Dichloroethene	mg/l	2.42	2.25	97.0	54-137	7.66	20	L627434-01	WG653691
cis-1,3-Dichloropropene	mg/l	2.38	2.16	95.1	63-127	9.72	20	L627434-01	WG653691
Dibromomethane	mg/l	2.41	2.09	96.5	68-131	14.3	20	L627434-01	WG653691
Dichlorodifluoromethane	mg/l	3.09	3.36	124.	16-188	8.40	22	L627434-01	WG653691
Ethylbenzene	mg/l	4.50	4.51	113.	64-135	0.220	20	L627434-01	WG653691
Iodomethane	mg/l	11.5	10.9	92.1	38-149	5.79	20	L627434-01	WG653691
Methylene Chloride	mg/l	2.26	2.17	86.2	52-130	4.07	20	L627434-01	WG653691
Styrene	mg/l	2.75	2.69	110.	58-152	2.24	20	L627434-01	WG653691
Tetrachloroethene	mg/l	2.65	2.68	106.	56-139	1.14	20	L627434-01	WG653691
Toluene	mg/l	5.07	4.93	110.	61-126	2.76	20	L627434-01	WG653691
trans-1,2-Dichloroethene	mg/l	2.38	2.42	95.1	45-137	1.87	20	L627434-01	WG653691
trans-1,3-Dichloropropene	mg/l	2.48	2.17	99.1	59-130	13.2	20	L627434-01	WG653691
trans-1,4-Dichloro-2-butene	mg/l	2.19	1.92	87.6	51-145	13.3	24	L627434-01	WG653691
Trichloroethene	mg/l	2.44	2.34	97.6	40-155	4.42	20	L627434-01	WG653691
Trichlorofluoromethane	mg/l	3.41	3.35	136.	35-177	1.60	23	L627434-01	WG653691
Vinyl acetate	mg/l	12.0	10.3	95.9	36-186	15.0	20	L627434-01	WG653691
Vinyl chloride	mg/l	2.79	2.87	111.	32-159	2.78	21	L627434-01	WG653691
Xylenes, Total	mg/l	21.7	21.8	120.	64-133	0.870	20	L627434-01	WG653691
4-Bromofluorobenzene				99.04	82-120				WG653691
Dibromofluoromethane				96.03	82-126				WG653691
Toluene-d8				99.44	92-112				WG653691
a,a,a-Trifluorotoluene				104.2	90-116				WG653691
Ethanol	mg/l	0.489	0.560	89.1	70-130	13.6	20	L626347-05	WG653575
Methanol	mg/l	0.393	0.499	78.5	70-130	23.8*	20	L626347-05	WG653575

Batch number /Run number / Sample number cross reference

WG653691: R2600338: L627434-01
WG653575: R2600458: L627434-01
WG654005: R2600763: L627434-01
WG654165: R2601920: L627434-01
WG654152: R2602197: L627434-01
WG654167: R2603757: L627434-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC
LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Esc. 1970

EnviroTech- NM
Lynn Berry
5796 US. Highway 64

Farmington, NM 87401

Quality Assurance Report
Level II

L627434

April 04, 2013

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Page 1 of 1

ESC LAB SCIENCES
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report To: Lynn Berry
Email To: lberry@envirotechnical.com

Project Description: Coastal Chemical Plant
City/State Collected:
Phone: FAX
Client Project #: 95007-0085
ESC Key:
Collected by: L. Hamm
Site/Facility ID#: P303045-01
PO #: 21477
Collected by (Signature):
Immediately Packed on Ice: N Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
Date Results Needed:
Email? __No __Yes
FAX? __No __Yes

CoCode (lab use only)
Template/Prelogin
Shipped Via

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	# of Cntrs	Isopropanol in water (V8260APP)	Methanol in water (MEETAC)	Reactive sulfide	Reactive Cyanide	Remarks/Contaminant	Sample # (lab only)
Wastewater - P303045-01		OT		3.26.13	9.30	5	X	X	X	X		L647434-01

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other: aqueous

pH _____ Temp _____
Flow _____ Other _____

Remarks: 3435 5512 3453

Relinquished by (Signature)	Date	Time	Received by (Signature)	Samples returned via: ☐ FedEx ☐ Courier ☐ UPS	Condition (lab use only)
Olivia Poe	3/27/13	13:57			JR
Relinquished by (Signature)	Date	Time	Received by (Signature)	Temp: 2.4°C	Bottles Received: 5
Relinquished by (Signature)	Date	Time	Received for lab by (Signature): Lynn Wooten	Date: 3/28/13	Time: 0900
				pH Checked	NCF: X

ESC
L·A·B S·C·I·E·N·C·E·S

NON-CONFORMANCE FORM

Login No.: L627434 pc

Date: 3/22/13

Evaluated by: MATT B

Client: ENVIROFORUM

Non-Conformance (check applicable items)

- ☐ Parameter(s) past holding time
- ☐ Improper temperature
- ☑ Improper container type
- ☐ Improper preservation
- ☐ Container lid not intact
- ☐ Login Clarification Needed
- ☐ Chain of custody is incomplete
- ☐ Chain of Custody is missing (see below)
- ☐ Broken container(s) (See below)
- ☐ Broken container: sufficient sample volume remains for analysis requested (See below)

If no COC: Received by_____
Date:_____Time:_____
Temp:_____Cont. Rec_____pH:_____
☐ Fedex ☐ UPS ☐SWA ☐ Other_____
Tracking #_____

- ☐ Insufficient packing material around container
- ☐ Insufficient packing material inside cooler
- ☐ Improper handling by carrier (FedEx / UPS / Courier
- ☐ Sample was frozen

Comments: Reactive Cyanide, Reactive Sulfide received in plastic

Login Instructions: TSR Initials: DK

Client informed by call / (email) / fax / voice mail date: 3/29 time: 10:00 CB

Client contact:

Quality to proceed w/ improper containers

August 28, 2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Kutz Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL N Section 31 Township 29 North Range 12 West; 36.723088, -108.088655, San Juan County, NM

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Triple S Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Crystal Higgins TITLE: Sales DATE: 8/29/18
SIGNATURE: _____ TELEPHONE NO.: 505-486-9425
Surface Waste Management Facility Authorized Agent

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

November 16, 2017

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Kutz CS

OrderNo.: 1710E55

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/27/2017 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1710E55**
Date Reported: **11/16/2017**

CLIENT: Souder, Miller and Associates
Project: Kutz CS
Lab ID: 1710E55-001 **Matrix:** AQUEOUS

Client Sample ID: Kutz BGT
Collection Date: 10/26/2017 2:30:00 PM
Received Date: 10/27/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **JLF**	
Mercury	ND	0.00020		mg/L	1	11/9/2017 5:00:36 PM	34923
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	11/6/2017 8:57:26 AM	34816
Barium	ND	100		mg/L	1	11/6/2017 8:57:26 AM	34816
Cadmium	ND	1.0		mg/L	1	11/6/2017 8:57:26 AM	34816
Chromium	ND	5.0		mg/L	1	11/6/2017 8:57:26 AM	34816
Lead	ND	5.0		mg/L	1	11/6/2017 8:57:26 AM	34816
Selenium	ND	1.0		mg/L	1	11/6/2017 8:57:26 AM	34816
Silver	ND	5.0		mg/L	1	11/6/2017 8:57:26 AM	34816
EPA METHOD 8270C: PAHS						Analyst: **DAM**	
Naphthalene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
1-Methylnaphthalene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
2-Methylnaphthalene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Acenaphthylene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Acenaphthene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Fluorene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Phenanthrene	ND	50	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Anthracene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Fluoranthene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Pyrene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Benz(a)anthracene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Chrysene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Benzo(b)fluoranthene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Benzo(k)fluoranthene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Benzo(a)pyrene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Dibenz(a,h)anthracene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Benzo(g,h,i)perylene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Indeno(1,2,3-cd)pyrene	ND	25	D	µg/L	10	11/14/2017 12:04:21 PM	34769
Surr: N-hexadecane	0	34.2-111	SD	%Rec	10	11/14/2017 12:04:21 PM	34769
Surr: Benzo(e)pyrene	0	39.3-124	SD	%Rec	10	11/14/2017 12:04:21 PM	34769
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	240	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Toluene	470	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Ethylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2,4-Trimethylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,3,5-Trimethylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753

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: Souder, Miller and Associates
Project: Kutz CS
Lab ID: 1710E55-001 **Matrix:** AQUEOUS

Client Sample ID: Kutz BGT
Collection Date: 10/26/2017 2:30:00 PM
Received Date: 10/27/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Naphthalene	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
1-Methylnaphthalene	ND	200		µg/L	50	10/31/2017 6:20:00 AM	A46753
2-Methylnaphthalene	ND	200		µg/L	50	10/31/2017 6:20:00 AM	A46753
Acetone	ND	500		µg/L	50	10/31/2017 6:20:00 AM	A46753
Bromobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Bromodichloromethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Bromoform	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Bromomethane	ND	150		µg/L	50	10/31/2017 6:20:00 AM	A46753
2-Butanone	ND	500		µg/L	50	10/31/2017 6:20:00 AM	A46753
Carbon disulfide	ND	500		µg/L	50	10/31/2017 6:20:00 AM	A46753
Carbon Tetrachloride	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Chlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Chloroethane	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
Chloroform	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Chloromethane	ND	150		µg/L	50	10/31/2017 6:20:00 AM	A46753
2-Chlorotoluene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
4-Chlorotoluene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
cis-1,2-DCE	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
cis-1,3-Dichloropropene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
Dibromochloromethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Dibromomethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2-Dichlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,3-Dichlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,4-Dichlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Dichlorodifluoromethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1-Dichloroethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1-Dichloroethene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2-Dichloropropane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,3-Dichloropropane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
2,2-Dichloropropane	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1-Dichloropropene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Hexachlorobutadiene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
2-Hexanone	ND	500		µg/L	50	10/31/2017 6:20:00 AM	A46753
Isopropylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
4-Isopropyltoluene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
4-Methyl-2-pentanone	ND	500		µg/L	50	10/31/2017 6:20:00 AM	A46753
Methylene Chloride	ND	150		µg/L	50	10/31/2017 6:20:00 AM	A46753

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: Souder, Miller and Associates
Client Sample ID: Kutz BGT
Project: Kutz CS
Collection Date: 10/26/2017 2:30:00 PM
Lab ID: 1710E55-001 **Matrix:** AQUEOUS **Received Date:** 10/27/2017 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**RAA**
n-Butylbenzene	ND	150		µg/L	50	10/31/2017 6:20:00 AM	A46753
n-Propylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
sec-Butylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Styrene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
tert-Butylbenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
Tetrachloroethene (PCE)	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
trans-1,2-DCE	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
trans-1,3-Dichloropropene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2,3-Trichlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2,4-Trichlorobenzene	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1,1-Trichloroethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,1,2-Trichloroethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Trichloroethene (TCE)	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Trichlorofluoromethane	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
1,2,3-Trichloropropane	ND	100		µg/L	50	10/31/2017 6:20:00 AM	A46753
Vinyl chloride	ND	50		µg/L	50	10/31/2017 6:20:00 AM	A46753
Xylenes, Total	210	75		µg/L	50	10/31/2017 6:20:00 AM	A46753
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	50	10/31/2017 6:20:00 AM	A46753
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	50	10/31/2017 6:20:00 AM	A46753
Surr: Dibromofluoromethane	103	70-130		%Rec	50	10/31/2017 6:20:00 AM	A46753
Surr: Toluene-d8	97.4	70-130		%Rec	50	10/31/2017 6:20:00 AM	A46753

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#: **1710E55**

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: A46753	RunNo: 46753
Prep Date:	Analysis Date: 10/31/2017	SeqNo: 1489928 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	19	1.0	20.00	0	94.5	70	130			
Chlorobenzene	19	1.0	20.00	0	96.0	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A46753	RunNo: 46753
Prep Date:	Analysis Date: 10/31/2017	SeqNo: 1489929 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A46753	RunNo: 46753
Prep Date:	Analysis Date: 10/31/2017	SeqNo: 1489929 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A46753	RunNo: 46753						
Prep Date:	Analysis Date: 10/31/2017	SeqNo: 1489929	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID lcs-34769	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 34769	RunNo: 47113
Prep Date: 11/2/2017	Analysis Date: 11/14/2017	SeqNo: 1503152 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	16	0.50	20.00	0	79.9	28.6	113			
1-Methylnaphthalene	14	0.50	20.00	0	67.9	27	113			
2-Methylnaphthalene	15	0.50	20.00	0	73.2	26.3	112			
Acenaphthylene	17	0.50	20.00	0	83.3	36.2	114			
Acenaphthene	18	0.50	20.00	0	88.7	35.6	116			
Fluorene	18	0.50	20.00	0	89.0	38.4	116			
Phenanthrene	18	1.0	20.00	0	88.8	42.3	118			
Anthracene	17	0.50	20.00	0	86.9	42.2	117			
Fluoranthene	18	0.50	20.00	0	90.1	42.5	118			
Pyrene	17	0.50	20.00	0	84.2	40.8	121			
Benz(a)anthracene	20	0.50	20.00	0	97.7	43	118			
Chrysene	17	0.50	20.00	0	86.9	39.4	119			
Benzo(b)fluoranthene	19	0.50	20.00	0	93.3	47.8	115			
Benzo(k)fluoranthene	19	0.50	20.00	0	95.6	40.5	120			
Benzo(a)pyrene	18	0.50	20.00	0	92.5	41.5	115			
Dibenz(a,h)anthracene	18	0.50	20.00	0	89.5	48.6	115			
Benzo(g,h,i)perylene	18	0.50	20.00	0	90.8	42	119			
Indeno(1,2,3-cd)pyrene	18	0.50	20.00	0	87.7	42.9	118			
Surr: N-hexadecane	71		87.60		81.3	34.2	111			
Surr: Benzo(e)pyrene	17		20.00		85.1	39.3	124			

Sample ID lcsd-34769	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 34769	RunNo: 47113
Prep Date: 11/2/2017	Analysis Date: 11/14/2017	SeqNo: 1503153 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	17	0.50	20.00	0	82.7	28.6	113	3.44	40.7	
1-Methylnaphthalene	17	0.50	20.00	0	82.8	27	113	19.8	38.4	
2-Methylnaphthalene	15	0.50	20.00	0	75.0	26.3	112	2.43	25.5	
Acenaphthylene	16	0.50	20.00	0	82.0	36.2	114	1.57	34.1	
Acenaphthene	17	0.50	20.00	0	84.5	35.6	116	4.85	32.1	
Fluorene	17	0.50	20.00	0	84.7	38.4	116	4.95	28	
Phenanthrene	17	1.0	20.00	0	83.3	42.3	118	6.39	37.4	
Anthracene	16	0.50	20.00	0	80.7	42.2	117	7.40	36.2	
Fluoranthene	17	0.50	20.00	0	85.8	42.5	118	4.89	26.6	
Pyrene	17	0.50	20.00	0	84.9	40.8	121	0.828	26.8	
Benz(a)anthracene	17	0.50	20.00	0	86.9	43	118	11.7	25.1	
Chrysene	16	0.50	20.00	0	81.1	39.4	119	6.90	23.3	
Benzo(b)fluoranthene	17	0.50	20.00	0	85.6	47.8	115	8.61	22.5	

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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	lcsd-34769	SampType:	LCSD		TestCode:	EPA Method 8270C: PAHs				
Client ID:	LCSS02	Batch ID:	34769		RunNo:	47113				
Prep Date:	11/2/2017	Analysis Date:	11/14/2017		SeqNo:	1503153	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	17	0.50	20.00	0	85.5	40.5	120	11.2	30.9	
Benzo(a)pyrene	17	0.50	20.00	0	84.4	41.5	115	9.16	23.2	
Dibenz(a,h)anthracene	18	0.50	20.00	0	88.6	48.6	115	1.01	26.5	
Benzo(g,h,i)perylene	17	0.50	20.00	0	87.0	42	119	4.27	30.7	
Indeno(1,2,3-cd)pyrene	18	0.50	20.00	0	89.6	42.9	118	2.14	25.4	
Surr: N-hexadecane	74		87.60		84.8	34.2	111	0	0	
Surr: Benzo(e)pyrene	17		20.00		83.1	39.3	124	0	0	

Sample ID	mb-34769	SampType:	MBLK		TestCode:	EPA Method 8270C: PAHs				
Client ID:	PBW	Batch ID:	34769		RunNo:	47113				
Prep Date:	11/2/2017	Analysis Date:	11/14/2017		SeqNo:	1503154	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	1.0								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	60		87.60		68.2	34.2	111			
Surr: Benzo(e)pyrene	15		20.00		73.6	39.3	124			

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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	MB-34923	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury				
Client ID:	PBW	Batch ID:	34923	RunNo:	47017				
Prep Date:	11/9/2017	Analysis Date:	11/9/2017	SeqNo:	1500290	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-34923	SampType:	LCS	TestCode:	EPA Method 7470: Mercury				
Client ID:	LCSW	Batch ID:	34923	RunNo:	47017				
Prep Date:	11/9/2017	Analysis Date:	11/9/2017	SeqNo:	1500291	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Sample ID	1710E55-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury				
Client ID:	Kutz BGT	Batch ID:	34923	RunNo:	47017				
Prep Date:	11/9/2017	Analysis Date:	11/9/2017	SeqNo:	1500293	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0040	0.00020	0.005000	0.0001159	78.3	75	125			

Sample ID	1710E55-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury				
Client ID:	Kutz BGT	Batch ID:	34923	RunNo:	47017				
Prep Date:	11/9/2017	Analysis Date:	11/9/2017	SeqNo:	1500294	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0040	0.00020	0.005000	0.0001159	78.5	75	125	0.227	20	

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#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID	MB-34816	SampType:	MBLK	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	PBW	Batch ID:	34816	RunNo:	46888					
Prep Date:	11/4/2017	Analysis Date:	11/6/2017	SeqNo:	1495802	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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID	LLLCS-34816	SampType:	LCSLL	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	BatchQC	Batch ID:	34816	RunNo:	46888					
Prep Date:	11/4/2017	Analysis Date:	11/6/2017	SeqNo:	1495803	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.020	0.02000	0	133	50	150			
Barium	ND	0.020	0.002000	0	121	50	150			
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Chromium	0.0067	0.0060	0.006000	0	112	50	150			
Lead	ND	0.0050	0.005000	0	57.2	50	150			
Selenium	0.057	0.050	0.05000	0	113	50	150			
Silver	ND	0.0050	0.005000	0	99.4	50	150			

Sample ID	LCS-34816	SampType:	LCS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	LCSW	Batch ID:	34816	RunNo:	46888					
Prep Date:	11/4/2017	Analysis Date:	11/6/2017	SeqNo:	1495804	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	105	80	120			
Barium	0.49	0.020	0.5000	0	98.4	80	120			
Cadmium	0.49	0.0020	0.5000	0	98.9	80	120			
Chromium	0.49	0.0060	0.5000	0	98.9	80	120			
Lead	0.50	0.0050	0.5000	0	99.2	80	120			
Selenium	0.52	0.050	0.5000	0	104	80	120			
Silver	0.10	0.0050	0.1000	0	102	80	120			

Sample ID	1710E55-001CMS	SampType:	MS	TestCode:	EPA 6010B: Total Recoverable Metals					
Client ID:	Kutz BGT	Batch ID:	34816	RunNo:	46888					
Prep Date:	11/4/2017	Analysis Date:	11/6/2017	SeqNo:	1495834	Units:	mg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.57	0.020	0.5000	0.02075	109	75	125			

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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710E55

16-Nov-17

Client: Souder, Miller and Associates

Project: Kutz CS

Sample ID 1710E55-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Kutz BGT	Batch ID: 34816	RunNo: 46888
Prep Date: 11/4/2017	Analysis Date: 11/6/2017	SeqNo: 1495834 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.020	0.5000	0.01230	101	75	125			
Cadmium	0.50	0.0020	0.5000	0.002240	99.6	75	125			
Chromium	0.52	0.0060	0.5000	0.009240	101	75	125			
Lead	0.51	0.0050	0.5000	0	102	75	125			
Selenium	0.60	0.050	0.5000	0.02856	114	75	125			
Silver	0.10	0.0050	0.1000	0	102	75	125			

Sample ID 1710E55-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Kutz BGT	Batch ID: 34816	RunNo: 46888
Prep Date: 11/4/2017	Analysis Date: 11/6/2017	SeqNo: 1495835 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.58	0.020	0.5000	0.02075	111	75	125	1.35	20	
Barium	0.52	0.020	0.5000	0.01230	101	75	125	0.182	20	
Cadmium	0.51	0.0020	0.5000	0.002240	101	75	125	0.997	20	
Chromium	0.52	0.0060	0.5000	0.009240	102	75	125	0.597	20	
Lead	0.51	0.0050	0.5000	0	102	75	125	0.769	20	
Selenium	0.61	0.050	0.5000	0.02856	117	75	125	2.79	20	
Silver	0.10	0.0050	0.1000	0	101	75	125	0.345	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- 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: SMA-FARM | Work Order Number: 1710E55 | RcptNo: 1

Received By: Sophia Campuzano 10/27/2017 8:00:00 AM

Completed By: Erin Melendrez 10/27/2017 9:22:48 AM

Reviewed By: 10/27/17

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: 1 (<2 or >12 unless noted)

Adjusted? no

Checked by: DDS

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	3.1	Good	Yes			

Chain-of-Custody Record

Client: Souder Miller & Assoc.

Mailing Address: 401 W. Broadway Farmington NM 87401

Phone #: 505 325-7535

email or Fax#: Ashley maxwell @ soudermiller.com

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

Accreditation: ☐ NELAP ☐ Other ____

☐ EDD (Type) ____

Turn-Around Time: ☑ Standard ☐ Rush ____

Project Name: Kutz CS

Project #:

Project Manager: Ashley MAXWELL

Sampler: Ramsey Watson

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.9 +0.2 (CF) = 3.1

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. 1710755	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
10/26/17	14:30	H2O	Kutz BGT	Various	Various	-001						X	X			X		

Remarks: 8260 Full List Report TCLP Compounds At TCLP Limits

Invoice Tom Long Enterprises

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/26/17	1643	Ramsey Watson	[signature]	10/26/17	1643
10/26/17	1946	[signature]	[signature]	10/27/17	0800

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.

August 28, 2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
Angel Peak Compressor Station

3. Location of Material (Street Address, City, State or ULSTR):
UL E Section 20 Township 27 North Range 10 West; 36.561288, -107.926090, San Juan County, NM

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Eggie Higgins TITLE: Super DATE: 8/23/18
SIGNATURE: _____ TELEPHONE NO.: 505-486-9425
Surface Waste Management Facility Authorized Agent

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

July 30, 2018

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Angel Peak

OrderNo.: 1807583

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/11/2018 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 #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1807583
Date Reported: 7/30/2018

CLIENT: Souder, Miller and Associates
Project: Angel Peak
Lab ID: 1807583-001 **Matrix:** AQUEOUS

Client Sample ID: Angel Peak
Collection Date: 7/10/2018 2:38:00 PM
Received Date: 7/11/2018 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY							Analyst: **rde**
Mercury	ND	0.20		mg/L	1	7/18/2018 4:32:55 PM	39272
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	7/19/2018 9:06:10 AM	39273
Barium	ND	100		mg/L	1	7/19/2018 9:06:10 AM	39273
Cadmium	ND	1.0		mg/L	1	7/19/2018 9:06:10 AM	39273
Chromium	ND	5.0		mg/L	1	7/19/2018 9:06:10 AM	39273
Lead	ND	5.0		mg/L	1	7/19/2018 9:06:10 AM	39273
Selenium	ND	1.0		mg/L	1	7/19/2018 9:06:10 AM	39273
Silver	ND	5.0		mg/L	1	7/19/2018 9:06:10 AM	39273
EPA METHOD 8270C: PAHS							Analyst: **DAM**
Naphthalene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
1-Methylnaphthalene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
2-Methylnaphthalene	0.50	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Acenaphthylene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Acenaphthene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Fluorene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Phenanthrene	0.82	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Anthracene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Fluoranthene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Pyrene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Benz(a)anthracene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Chrysene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Benzo(b)fluoranthene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Benzo(k)fluoranthene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Benzo(a)pyrene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	7/23/2018 10:27:24 PM	39235
Surr: N-hexadecane	74.6	18.7-145		%Rec	1	7/23/2018 10:27:24 PM	39235
Surr: Benzo(e)pyrene	79.8	28.2-137		%Rec	1	7/23/2018 10:27:24 PM	39235
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**
Benzene	ND	0.50		µg/L	200	7/13/2018 2:44:00 PM	R52709
Toluene	0.85	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Ethylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Methyl tert-butyl ether (MTBE)	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2,4-Trimethylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,3,5-Trimethylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2-Dichloroethane (EDC)	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709

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: Souder, Miller and Associates
Project: Angel Peak
Lab ID: 1807583-001 **Matrix:** AQUEOUS

Client Sample ID: Angel Peak
Collection Date: 7/10/2018 2:38:00 PM
Received Date: 7/11/2018 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Naphthalene	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
1-Methylnaphthalene	ND	0.80		µg/L	200	7/13/2018 2:44:00 PM	R52709
2-Methylnaphthalene	ND	0.80		µg/L	200	7/13/2018 2:44:00 PM	R52709
Acetone	ND	2.0		µg/L	200	7/13/2018 2:44:00 PM	R52709
Bromobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Bromodichloromethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Bromoform	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Bromomethane	ND	0.60		µg/L	200	7/13/2018 2:44:00 PM	R52709
2-Butanone	ND	2.0		µg/L	200	7/13/2018 2:44:00 PM	R52709
Carbon disulfide	ND	2.0		µg/L	200	7/13/2018 2:44:00 PM	R52709
Carbon Tetrachloride	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Chlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Chloroethane	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
Chloroform	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Chloromethane	ND	0.60		µg/L	200	7/13/2018 2:44:00 PM	R52709
2-Chlorotoluene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
4-Chlorotoluene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
cis-1,2-DCE	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
cis-1,3-Dichloropropene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2-Dibromo-3-chloropropane	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
Dibromochloromethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Dibromomethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2-Dichlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,3-Dichlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,4-Dichlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Dichlorodifluoromethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1-Dichloroethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1-Dichloroethene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2-Dichloropropane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,3-Dichloropropane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
2,2-Dichloropropane	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1-Dichloropropene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Hexachlorobutadiene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
2-Hexanone	ND	2.0		µg/L	200	7/13/2018 2:44:00 PM	R52709
Isopropylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
4-Isopropyltoluene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
4-Methyl-2-pentanone	ND	2.0		µg/L	200	7/13/2018 2:44:00 PM	R52709
Methylene Chloride	ND	0.60		µg/L	200	7/13/2018 2:44:00 PM	R52709

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
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Angel Peak
Lab ID: 1807583-001
Matrix: AQUEOUS
Client Sample ID: Angel Peak
Collection Date: 7/10/2018 2:38:00 PM
Received Date: 7/11/2018 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
n-Butylbenzene	ND	0.60		µg/L	200	7/13/2018 2:44:00 PM	R52709
n-Propylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
sec-Butylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Styrene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
tert-Butylbenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1,1,2-Tetrachloroethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1,2,2-Tetrachloroethane	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
Tetrachloroethene (PCE)	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
trans-1,2-DCE	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
trans-1,3-Dichloropropene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2,3-Trichlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2,4-Trichlorobenzene	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1,1-Trichloroethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,1,2-Trichloroethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Trichloroethene (TCE)	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Trichlorofluoromethane	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
1,2,3-Trichloropropane	ND	0.40		µg/L	200	7/13/2018 2:44:00 PM	R52709
Vinyl chloride	ND	0.20		µg/L	200	7/13/2018 2:44:00 PM	R52709
Xylenes, Total	ND	0.30		µg/L	200	7/13/2018 2:44:00 PM	R52709
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	200	7/13/2018 2:44:00 PM	R52709
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	200	7/13/2018 2:44:00 PM	R52709
Surr: Dibromofluoromethane	96.6	70-130		%Rec	200	7/13/2018 2:44:00 PM	R52709
Surr: Toluene-d8	93.2	70-130		%Rec	200	7/13/2018 2:44:00 PM	R52709

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

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180713053
Project Name: 1807583

Analytical Results Report

Sample Number 180713053-001 **Sampling Date** 7/10/2018 **Date/Time Received** 7/13/2018 11:15 AM
Client Sample ID 1807583-001D / ANGEL PEAK **Sampling Time** 2:38 PM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	0.1	7/17/2018 10:45:00 AM	RPU	SW846 CH7	
Flashpoint	>200	°F		7/19/2018 4:25:00 PM	GPB	EPA 1010	
pH	4.52	pH Units		7/17/2018 1:45:00 PM	RPU	SM 4500pH-B	
Reactive sulfide	2.03	mg/L	0.2	7/26/2018 2:50:00 PM	ETL	SW846 CH7	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	180713053
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1807583
Attn:	ANDY FREEMAN		

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.160	mg/L	0.2	80.0	70-130	7/26/2018	7/26/2018
Cyanide (reactive)	0.566	mg/L	0.5	113.2	80-120	7/17/2018	7/17/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180712086-001	Reactive sulfide	ND	1.25	mg/L	1.388	90.1	70-130	7/26/2018	7/26/2018
180713053-001	Cyanide (reactive)	ND	5.69	mg/L	5	113.8	80-120	7/17/2018	7/17/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	5.74	mg/L	5	114.8	0.9	0-25	7/17/2018	7/17/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	7/17/2018	7/17/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87853; KY:90013; MT:CERT0078; NV:ID00013,NV:ID00013; OR:ID200001-002; WA:C585
Certifications held by Anatek Labs WA: EPA:WA01069; ID:WA00159; WA:C585; MT:Cert0095; FL(NELAP): E871C99

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R52709	RunNo: 52709
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730656 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	80.9	70	130			
Toluene	17	1.0	20.00	0	87.1	70	130			
Chlorobenzene	18	1.0	20.00	0	89.4	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	86.8	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.5	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R52709	RunNo: 52709
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730657 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								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R52709	RunNo: 52709
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730657 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R52709	RunNo: 52709						
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730657	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID 1807583-001ams	SampType: MS	TestCode: EPA Method 8260B: VOLATILES						
Client ID: Angel Peak	Batch ID: R52709	RunNo: 52709						
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730661	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.8	0.20	4.000	0.4872	83.2	60.5	137			
Toluene	4.3	0.20	4.000	0.8500	87.4	70	130			
Chlorobenzene	3.6	0.20	4.000	0	89.1	70	130			
1,1-Dichloroethene	3.4	0.20	4.000	0	85.5	70	130			
Trichloroethene (TCE)	3.3	0.20	4.000	0	82.3	70	130			
Surr: 1,2-Dichloroethane-d4	2.0		2.000		101	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		96.7	70	130			
Surr: Dibromofluoromethane	1.9		2.000		95.1	70	130			
Surr: Toluene-d8	1.9		2.000		93.2	70	130			

Sample ID 1807583-001amsd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID: Angel Peak	Batch ID: R52709	RunNo: 52709						
Prep Date:	Analysis Date: 7/13/2018	SeqNo: 1730662	Units: µg/L					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.6	0.20	4.000	0.4872	78.8	60.5	137	4.74	20	
Toluene	4.1	0.20	4.000	0.8500	82.5	70	130	4.65	20	
Chlorobenzene	3.4	0.20	4.000	0	84.9	70	130	4.91	20	
1,1-Dichloroethene	3.3	0.20	4.000	0	81.9	70	130	4.22	20	
Trichloroethene (TCE)	3.1	0.20	4.000	0	77.9	70	130	5.49	20	
Surr: 1,2-Dichloroethane-d4	2.1		2.000		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	2.0		2.000		99.1	70	130	0	0	
Surr: Dibromofluoromethane	1.9		2.000		96.6	70	130	0	0	
Surr: Toluene-d8	1.9		2.000		93.5	70	130	0	0	

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID	lcs-39235	SampType:	LCS	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSW	Batch ID:	39235	RunNo:	52921					
Prep Date:	7/17/2018	Analysis Date:	7/23/2018	SeqNo:	1738876	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	13	0.50	20.00	0	62.7	28.6	113			
1-Methylnaphthalene	14	0.50	20.00	0	71.4	27	113			
2-Methylnaphthalene	13	0.50	20.00	0	63.6	26.3	112			
Acenaphthylene	16	0.50	20.00	0	80.5	36.2	114			
Acenaphthene	16	0.50	20.00	0	82.0	35.6	116			
Fluorene	15	0.50	20.00	0	76.3	38.4	116			
Phenanthrene	15	0.50	20.00	0	73.3	42.3	118			
Anthracene	15	0.50	20.00	0	73.3	42.2	117			
Fluoranthene	16	0.50	20.00	0	79.4	42.5	118			
Pyrene	17	0.50	20.00	0	85.5	40.8	121			
Benz(a)anthracene	17	0.50	20.00	0	82.8	43	118			
Chrysene	16	0.50	20.00	0	78.7	39.4	119			
Benzo(b)fluoranthene	18	0.50	20.00	0	88.7	47.8	115			
Benzo(k)fluoranthene	17	0.50	20.00	0	86.3	40.5	120			
Benzo(a)pyrene	16	0.50	20.00	0	78.1	41.5	115			
Dibenz(a,h)anthracene	18	0.50	20.00	0	89.5	48.6	115			
Benzo(g,h,i)perylene	14	0.50	20.00	0	68.4	42	119			
Indeno(1,2,3-cd)pyrene	18	0.50	20.00	0	89.8	42.9	118			
Surr: N-hexadecane	82		87.60		93.2	18.7	145			
Surr: Benzo(e)pyrene	19		20.00		93.5	28.2	137			

Sample ID	lcsd-39235	SampType:	LCSD	TestCode:	EPA Method 8270C: PAHs					
Client ID:	LCSS02	Batch ID:	39235	RunNo:	52921					
Prep Date:	7/17/2018	Analysis Date:	7/23/2018	SeqNo:	1738877	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	12	0.50	20.00	0	57.5	28.6	113	8.65	40.7	
1-Methylnaphthalene	13	0.50	20.00	0	66.0	27	113	7.86	38.4	
2-Methylnaphthalene	12	0.50	20.00	0	59.5	26.3	112	6.66	25.5	
Acenaphthylene	13	0.50	20.00	0	66.6	36.2	114	18.9	34.1	
Acenaphthene	14	0.50	20.00	0	69.0	35.6	116	17.2	32.1	
Fluorene	14	0.50	20.00	0	69.5	38.4	116	9.33	28	
Phenanthrene	13	0.50	20.00	0	67.1	42.3	118	8.83	37.4	
Anthracene	14	0.50	20.00	0	68.6	42.2	117	6.62	36.2	
Fluoranthene	15	0.50	20.00	0	76.7	42.5	118	3.46	26.6	
Pyrene	17	0.50	20.00	0	86.3	40.8	121	0.931	26.8	
Benz(a)anthracene	16	0.50	20.00	0	81.0	43	118	2.20	25.1	
Chrysene	15	0.50	20.00	0	74.8	39.4	119	5.08	23.3	
Benzo(b)fluoranthene	17	0.50	20.00	0	83.5	47.8	115	6.04	22.5	

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID lcsd-39235	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 39235	RunNo: 52921
Prep Date: 7/17/2018	Analysis Date: 7/23/2018	SeqNo: 1738877 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	16	0.50	20.00	0	78.1	40.5	120	9.98	30.9	
Benzo(a)pyrene	15	0.50	20.00	0	77.4	41.5	115	0.900	23.2	
Dibenz(a,h)anthracene	16	0.50	20.00	0	80.5	48.6	115	10.6	26.5	
Benzo(g,h,i)perylene	14	0.50	20.00	0	67.8	42	119	0.881	30.7	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.8	42.9	118	9.32	25.4	
Surr: N-hexadecane	67		87.60		76.1	18.7	145	0	0	
Surr: Benzo(e)pyrene	17		20.00		85.8	28.2	137	0	0	

Sample ID mb-39235	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 39235	RunNo: 52921
Prep Date: 7/17/2018	Analysis Date: 7/23/2018	SeqNo: 1738878 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	0.50								
2-Methylnaphthalene	ND	0.50								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	71		87.60		81.5	18.7	145			
Surr: Benzo(e)pyrene	19		20.00		92.7	28.2	137			

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID	MB-39272	SampType:	MBLK	TestCode:	EPA Method 7470: Mercury					
Client ID:	PBW	Batch ID:	39272	RunNo:	52797					
Prep Date:	7/18/2018	Analysis Date:	7/18/2018	SeqNo:	1734367	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-39272	SampType:	LCS	TestCode:	EPA Method 7470: Mercury					
Client ID:	LCSW	Batch ID:	39272	RunNo:	52797					
Prep Date:	7/18/2018	Analysis Date:	7/18/2018	SeqNo:	1734368	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.7	80	120			

Sample ID	1807583-001CMS	SampType:	MS	TestCode:	EPA Method 7470: Mercury					
Client ID:	Angel Peak	Batch ID:	39272	RunNo:	52797					
Prep Date:	7/18/2018	Analysis Date:	7/18/2018	SeqNo:	1734370	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0002841	95.9	75	125			

Sample ID	1807583-001CMSD	SampType:	MSD	TestCode:	EPA Method 7470: Mercury					
Client ID:	Angel Peak	Batch ID:	39272	RunNo:	52797					
Prep Date:	7/18/2018	Analysis Date:	7/18/2018	SeqNo:	1734371	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0002841	96.8	75	125	0.873	20	

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#: 1807583

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID MB-39273	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 39273	RunNo: 52818
Prep Date: 7/18/2018	Analysis Date: 7/19/2018	SeqNo: 1735256 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								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID LCS-39273	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 39273	RunNo: 52818
Prep Date: 7/18/2018	Analysis Date: 7/19/2018	SeqNo: 1735257 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	104	80	120			
Barium	0.51	0.020	0.5000	0	102	80	120			
Cadmium	0.51	0.0020	0.5000	0	102	80	120			
Chromium	0.53	0.0060	0.5000	0	107	80	120			
Lead	0.51	0.0050	0.5000	0	101	80	120			
Selenium	0.49	0.050	0.5000	0	98.3	80	120			
Silver	0.10	0.0050	0.1000	0	104	80	120			

Sample ID 1807583-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Angel Peak	Batch ID: 39273	RunNo: 52818
Prep Date: 7/18/2018	Analysis Date: 7/19/2018	SeqNo: 1735273 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.57	0.020	0.5000	0	114	75	125			
Cadmium	0.54	0.0020	0.5000	0	107	75	125			
Lead	0.55	0.0050	0.5000	0	109	75	125			
Selenium	0.43	0.050	0.5000	0	85.7	75	125			
Silver	0.12	0.0050	0.1000	0.004700	115	75	125			

Sample ID 1807583-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Angel Peak	Batch ID: 39273	RunNo: 52818
Prep Date: 7/18/2018	Analysis Date: 7/19/2018	SeqNo: 1735274 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.56	0.020	0.5000	0	113	75	125	1.47	20	
Cadmium	0.53	0.0020	0.5000	0	106	75	125	1.33	20	
Lead	0.54	0.0050	0.5000	0	109	75	125	0.455	20	

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#: **1807583**

30-Jul-18

Client: Souder, Miller and Associates

Project: Angel Peak

Sample ID	1807583-001CMSD	SampType:	MSD		TestCode:	EPA 6010B: Total Recoverable Metals				
Client ID:	Angel Peak	Batch ID:	39273		RunNo:	52818				
Prep Date:	7/18/2018	Analysis Date:	7/19/2018		SeqNo:	1735274	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.44	0.050	0.5000	0	88.7	75	125	3.40	20	
Silver	0.11	0.0050	0.1000	0.004700	107	75	125	6.95	20	

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: SMA-FARM | Work Order Number: 1807583 | RcptNo: 1

Received By: Erin Melendrez 7/11/2018 8:10:00 AM

Completed By: Ashley Gallegos 7/12/2018 7:42:31 AM

Reviewed By: ENM 7/12/18 Labeled by: JO 7/12/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

of preserved bottles checked for pH: 1 2 (<2 or >12 unless noted)

Adjusted? JD

Checked by: JO 7/12/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: Ashley Maxwell

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

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Angel Peak

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2 +0.3(cf) = 1.5

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. 1807583	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI				Air Bubbles (Y or N)
7/10/18	14:38	Aqueous	Angel Peak	Various	Various	-001						X	X			X		X				

Date: 7/10/18 Time: 1640 Relinquished by: [signature]
Received by: [signature] Date 7/10/18 Time 1640

Date: 7/10/18 Time: 1836 Relinquished by: [signature]
Received by: Courier EJW 7/11/18 Date 07/11/18 Time 0810

Remarks: 8260 Full List Report
TCLP Compound at TCLP Limits
Invoice Enterprise CC Tom Long

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.

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Travis

No recent chats
Start a new one

C-138 COW and Lab Report

Inbox ×

Long, Thomas 12:50 PM (2 ho
to me, Randall, aguamossghiggins@hotmail.com

Travis,

Please find the attached C-138 and lab report for our Lindrith Compressor Station. Randy Shirley will coordinate with you on when he will transport

Randy,

Travis's contact information is below.

Travis Gibson
Agua Moss LLC.
Office#: (505) 632-3640
Cell#: (505)307-6974
Fax#: (505)632-3641
tdgibson.aguamoss@gmail.com

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

— logo

Appendix E

All tracts within the AOR were reviewed for activity that had ensued since 2017.

Since the last AOR six wells were plugged and abandoned. P&A reports are attached appendix E.


34; T30N.R12W
35; T30N.R12W
36; T30N.R12W
3004520140
Type: G
3004508945
Type: G
3004508950
Type: G
3004508946
Type: G
3004524037
Type: G
3004533580
Type: G
3004508839
Type: G
3004508844
Type: G
3004532241
Type: G
3004508851
Type: G
3004534346
Type: G
3004508823
Type: G
3004528653
Type: S
3004508797
Type: G
3004508793
Type: G
03; T29N.R12W
02; T29N.R12W
01; T29N.R12W
3004508712
Type: G
3004508709
Type: G
3004508714
Type: G
3004508713
Type: G
3004530486
Type: G
3004526214
Type: G
3004532346
Type: G
3004531580
Type: G
3004533573
Type: G
3004523758
Type: G
3004531581
Type: G
3004513092
Type: G
3004508615
Type: G
3004522116
Type: G
3004508612
Type: G
3004532665
Type: G
3004524447
Type: G
3004508558
Type: G
3004529945
Type: G
3004524283
Type: G
200 m
1000 ft

													Surface Casing			*INT Casing*			*Production Casing*					
API	**Well Name**	**Well #**	**Current Operator**	**Type**	**Lease**	**Status**	**Sec**	**TWN**	**RNG**	**UL**	**Spud Date**	**TD**	**size**	**depth**	**Sacks TOC**	**size**	**depth**	**Sacks TOC**	**size**	**depth**	**Sacks TOC**	**Perfs**	**Packer**	**PLUGGED**
30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
30-045-08851	ALLEN A	#001	BP America	Gas	Private	Plugged	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		3/27/2018
30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
30-045-34348	Allen Com	#100	Burlington	Gas	Federal	Plugged	1	29N	12W	B	10/22/2007	138												1/22/2009
30-045-08782	Cornell	5	Burlington	Gas	Federal	Plugged	1	29N	12W	G	9/30/1955	99999												4/28/1994
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996												9/15/2005
30-045-29538	Cornell	5R	HilCorp	Gas	Federal	Active	1	29N	12W	A	4/14/1998	2225	7	131	45-53				3.5	2215	434-741	2029-2059		
30-045-29539	Cornell	3R	Epic Energy	Gas	Federal	Plugged	1	29N	12W	I	10/7/1955	0	7	131	45-53				3.5	2193	434-741	1991-2041		7/13/2018
30-045-32346	CORNELL	#002R	Southland Royalty	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
30-045-31612	Cornell	2S	Southland Royalty	Gas	Federal	Active	1	29N	12W	O	7/27/1957	0	7	136	56 surf				4.5	2058	225 surf	1725-1921		
30-045-08661	Dudley Cornell A	#001	BP America	Gas	Federal	Active	1	29N	12W	O	11/15/1960	6730	9.625	263	200 surf				4.5	6707	300 surf	6434-6587		
30-045-24129	Dudley Cornell A	#001E	BP America	Gas	Federal	Active	1	29N	12W	G	4/28/1980	6722	9.625	348	250 surf				4.5	6710	180 surf	6496-6629		
30-045-29167	Hike	1	Dugan Production	Gas	Federal	Active	1	29N	12W	G	7/10/1994	3840	8.625	260	175 surf				4.5	3820	595 surf	3710-3718	3710	
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-08783	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	1	29N	12W	F	7/9/2003	2090												12/31/1901
30-045-08641	PRE-ONGARD WELL	#003	Pre Ongard	Gas	Federal	Plugged	1	29N	12W	O	4/11/1998	2203												11/16/1981
30-045-32241	BECK	#001R	HilCorp	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
30-045-33811	BECK	#001S	HilCorp	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-31580	CORNELL COM	#500	HilCorp	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
30-045-08714	CORNELL SRC	#007	HilCorp	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08704	MCGRATH B	#001	HilCorp	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136												1998

30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged	2	29N	12W	J	3/23/2001	2235												6/25/2010
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125												2/23/1984
30-045-27635	PRE-ONGARD WELL	#500		Gas	Federal	Plugged	2	29N	12W	M														12/31/1901
30-045-08839	YOUNG	#001	HilCorp	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040												3/1/2013
30-045-33580	MCGRATH	#003S	HilCorp	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
30-045-08712	MCGRATH A	#001	HilCorp	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940												11/10/1964
30-045-32931	WALKER	#100S	HilCorp	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		
30-045-08801	WALKER 1	#001	HilCorp	Gas	Private	Active	3	29N	12W	E	4/12/1960	6620	8.625	232	150 surf				4.5	6620	300 surf	6546-6556		
30-045-30244	WALKER 100	#100	HilCorp	Gas	Private	TA'd	3	29N	12W	L	3/30/2001	1948	7	126	140-168				4.5	1940	219-399	1659-1872	1597 CIBP@1609	Tad
30-045-60274	WALKER 2	#002	Burlington	Gas	Private	Plugged	3	29N	12W	D	1/8/1945	1974												7/24/1998
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050												10/12/2009
30-045-08720	DEVONIAN FEDERAL	#001	Holcomb Oil & Gas	Gas	Federal	Active	4	29N	12W	K	6/23/1959	6538												
30-045-08804	FEDERAL	#001	Riggs Oil & Gas	Gas	Federal	Plugged	4	29N	12W	F	5/29/1959	1856												2/9/2017
30-045-24552	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Federal	Plugged	4	29N	12W	A	5/29/1981	0												12/7/1995
30-045-29117	RIGGS	#001	Enduring Resources	Gas	Private	Active	4	29N	12W	A	6/24/1994	1900												
30-045-29118	RIGGS	#002	Enduring Resources	Gas	Private	Active	4	29N	12W	N	6/28/1994	1890												
30-045-32239	RIGGS	#003	Enduring Resources	Gas	Private	Active	4	29N	12W	C	2/21/2005	1906												
30-045-32312	RIGGS	#004	Enduring Resources	Gas	Private	Active	4	29N	12W	P	3/20/2005	2002												
30-045-08718	STANDARD	#001	HilCorp	Gas	Federal	Active	4	29N	12W	J	11/3/1960	6600	8.625	236	175 surf				4.5	6600	250 surf	6356-6510		
30-045-08586	FLORANCE GAS COM B	#001	BP America	Gas	Federal	Active	9	29N	12W	H	1/20/1964	6470												
30-045-26855	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	9	29N	12W	B	3/18/1988	0												3/9/1989
30-045-28824	ROPCO FEE FC 9	#002	HilCorp	Gas	Private	Active	9	29N	12W	A	11/25/1992	1975												
30-045-34452	BECK 29 12 10	#108	Synergy	Gas	Federal	Active	10	29N	12W	N	2/21/2008	1865												
30-045-23889	BECK A	#001E	HilCorp	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		

30-045-08517	BECK A	#001	HilCorp	Gas	Private	Active	10	29N	12W	J	6/12/1962	6410												
30-045-08605	**CORNELL**	**#007**	**Burlington**	**Gas**	**Federal**	**Plugged**	**10**	**29N**	**12W**	**C**	**4/20/1956**	**1807**												**7/18/1996**
30-045-30381	CORNELL	#100	HilCorp	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
30-045-08601	CORNELL A	#001	BP America	Gas	Federal	Active	10	29N	12W	D	12/28/1960	6510												
30-045-24132	**CORNELL A**	**#001E**	**BP America**	**Gas**	**Federal**	**Plugged**	**10**	**29N**	**12W**	**N**	**4/4/1980**	**6350**												**1/24/2018**
30-045-23758	**Pre-Ongard**		**Southland**	**Gas**	**Federal**	**Plugged**	**10**	**29N**	**12W**	**A**	**12/19/1980**	**1870**												**2/10/1984**
30-045-08523	PRE-ONGARD WELL	#001	Pre Ongard	Water	Private	Permanently	10	29N	12W	J	8/21/1946	1871												??
30-045-08475	**CARROLL CORNELL**	**#012**	**Producing Royalties**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**P**	**11/22/1953**	**1895**												**6/13/1979**
30-045-08615	CORNELL	#006	Epic Energy	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
30-045-31581	CORNELL	#101	HilCorp	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
30-045-24447	FEDERAL PRI	#001E	HilCorp	Gas	Federal	Active	11	29N	12W	H	10/9/1980	6581												
30-045-22118	**PAYNE**	**#001**	**Producing Royalties**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**A**	**7/31/1976**	**2060**												**2/13/2002**
30-045-29945	PAYNE	#001R	Mcelvain Energy	Gas	Federal	Active	11	29N	12W	H	10/27/1999	2050												
30-045-13218	**PRE-ONGARD WELL**	**#010**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**A**		**0**												**12/31/1901**
30-045-08558	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**G**	**1/1/1940**	**0**												**4/16/1976**
30-045-08515	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Private**	**Plugged**	**11**	**29N**	**12W**	**L**	**11/25/1932**	**0**												**12/13/1982**
30-045-20067	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**O**	**5/5/1967**	**0**												**4/18/1986**
30-045-32667	PRI	#003	Mcelvain Energy	Gas	Federal	Active	11	29N	12W	I	2/27/2005	1960												
30-045-24086	CORNELL D	#001E	BP America	Gas	Federal	Active	12	29N	12W	A	5/22/1980	6635												
30-045-24283	CORNELL E	#001E	BP America	Gas	Federal	Active	12	29N	12W	F	5/12/1980	6609												
30-045-08444	**CORNELL E**	**#001**	**BP America**	**Gas**	**Federal**	**Plugged**	**12**	**29N**	**12W**	**M**	**9/28/1962**	**6562**												**6/27/2017**
30-045-08528	**CORNELL SRC**	**#004**	**Burlington**	**Gas**	**Federal**	**Plugged**	**12**	**29N**	**12W**	**K**	**5/25/1941**	**1970**												**3/29/2017**
30-045-22119	**PAYNE**	**#002**	**Mcelvain Energy**	**Gas**	**Federal**	**Plugged**	**12**	**29N**	**12W**	**F**	**7/22/1976**	**2062**												**10/30/2010**
30-045-22962	PAYNE	#002J	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	E	6/12/1978	2026												
30-045-33015	PRI	#001S	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	A	9/20/2005	2057												

30-045-32665	PRI	#001	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	E	2/17/2005	2090												
30-045-32666	PRI	#002	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	M	2/8/2005	2010												
30-045-09117	**PRE-ONGARD WELL**	**#001**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**25**	**30N**	**12W**	**M**	**4/13/1953**	**0**												**5/26/1958**
30-045-26121	ROWLAND GAS COM	#001E	HilCorp	Gas	Private	Active	25	30N	12W	M	3/19/1985	6560												
30-045-29707	RUBY CORSCOT A	#001	HilCorp	Gas	Private	Active	25	30N	12W	N	9/25/1999	2007												
30-045-31641	RUBY CORSCOT A	#002	HilCorp	Gas	Private	Active	25	30N	12W	E	6/2/2003	2076												
30-045-30456	**KATY COM**	**#002**	**MERRION OIL & GAS CORP**	**Gas**	**Private**	**Plugged**	**26**	**30N**	**12W**	**P**	**4/27/2001**	**2028**												**8/10/2015**
30-045-30027	PADILLA	#001	HilCorp	Gas	Private	Active	26	30N	12W	F	1/15/2004	1953												
30-045-32243	PADILLA	#002	HilCorp	Gas	Private	Active	26	30N	12W	N	5/13/2004	2153												
30-045-09177	**PAUL PALMER**	**#001**	**MERRION OIL & GAS CORP**	**Gas**	**Private**	**Plugged**	**26**	**30N**	**12W**	**L**	**9/13/1961**	**3509**												**8/14/2015**
30-045-09165	**PAUL PALMER D**	**#001**	**[5073] CONOCO INC**	**Gas**	**Private**	**Plugged**	**26**	**30N**	**12W**	**L**	**10/11/1961**	**99999**												**3/17/1995**
30-045-29414	**PRE-ONGARD WELL**	**#001**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**26**	**30N**	**12W**	**G**	**6/21/1953**	**0**												**12/31/1901**
30-045-09130	**PRE-ONGARD WELL**	**#003**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**26**	**30N**	**12W**	**O**		**0**												**3/12/1954**
30-045-30544	DUFF GAS COM	#003	HilCorp	Gas	Private	Active	27	30N	12W	P	4/1/2001	5167												
30-045-13120	**DUFF GAS COM B**	**#001**	**AMERICA PRODUCTION**	**Gas**	**Private**	**Plugged**	**27**	**30N**	**12W**	**P**	**2/28/1962**	**1950**												**5/30/1996**
30-045-09134	DUFF GAS COM C	#001	HilCorp	Gas	Private	Active	27	30N	12W	M	1/30/1964	6365												
30-045-26076	DUFF GAS COM C	#001E	HilCorp	Gas	Private	Active	27	30N	12W	P	9/20/1984	6500												
30-045-29664	DUFF GAS COM C	#002	HilCorp	Gas	Private	Active	27	30N	12W	M	10/16/1998	1856												
30-045-31284	DUFF GAS COM C	#004	HilCorp	Gas	Private	Active	27	30N	12W	P	1/27/2003	1996												
30-045-09200	**PRE-ONGARD WELL**	**#001**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**27**	**30N**	**12W**	**L**	**3/30/1947**	**0**												**3/17/1959**
30-045-34235	GILBREATH	#002	Enduring Resources	Gas	Private	Active	28	30N	12W	O	4/30/2008	2170												
30-045-09037	**HARGIS**	**#001**	**MCGEE OIL & GAS ONSHORE LP**	**Gas**	**Private**	**Plugged**	**33**	**30N**	**12W**	**G**	**9/15/1944**	**1808**												**2/23/1994**
30-045-08998	**JULANDER**	**#002**	**PRODUCTION CORP**	**Gas**	**Private**	**Plugged**	**33**	**30N**	**12W**	**I**	**4/1/1946**	**1936**												**4/12/1999**
30-045-09001	MADDOX	#001	HilCorp	Gas	Private	Active	33	30N	12W	J	9/21/1961	6400												
30-045-08999	**PRE-ONGARD WELL**	**#002**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**33**	**30N**	**12W**	**J**	**7/10/1946**	**0**												**6/4/1982**
30-045-29023	REDFERN	#002	Enduring Resources	Gas	Private	Active	33	30N	12W	H	12/5/1993	1950												

30-045-32236	REDFERN	#003	Enduring Resources	Gas	Private	Active	33	30N	12W	I	3/8/2005	1993												
30-045-28912	SHIOTANI	#007	Enduring Resources	Gas	Private	Active	33	30N	12W	K	12/31/1992	1782												
30-045-26141	DUFF GAS COM	#001E	HilCorp	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
30-045-09071	DUFF GAS COM	#001	HilCorp	Gas	Private	Active	34	30N	12W	D	1/30/1962	6425												
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137												9/26/2008
30-045-31756	JULANDER	#100	HilCorp	Gas	Private	Shut In	34	30N	12W	D	7/13/2005	1895												
30-045-33411	JULANDER	#100S	HilCorp	Gas	Federal	Shut In	34	30N	12W	M	3/7/2006	2075												
30-045-25923	MCGRATH	#004	BURLINGTON RESOURCES OIL	Salt Water Disposal	Federal	Plugged	34	30N	12W	B	9/4/1984	4700												7/25/2013
30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637												4/29/2009
30-045-09052	PRE-ONGARD WELL	#001	ONGARD WELL OPERATOR	Gas	Federal	Plugged	34	30N	12W	F	9/11/1945	0												1/22/1964
30-045-08939	PRE-ONGARD WELL	#001	ONGARD WELL OPERATOR	Gas	Private	Plugged	34	30N	12W	L	1/1/1945	0												6/4/1982
30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
30-045-31355	CARNAHAN COM	#001Y	HOLCOMB OIL & GAS INC	Gas	Private	Active	35	30N	12W	A	2/15/2003	2150												
30-045-11770	HUDSON J	#003	HilCorp	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH												6/9/1982
30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608												3/26/2013
30-045-12188	NEW MEXICO COM N	#001	HilCorp	Gas	State	Active	36	30N	12W	E	1/2/1966	6562												
30-045-31074	NEW MEXICO COM N	#100	HilCorp	Gas	State	Shut In	36	30N	12W	A	8/29/2002	2135												
30-045-08986	STATE COM AH	#030	HilCorp	Gas	State	Active	36	30N	12W	I	6/14/1961	6645												
30-045-24037	STATE COM AH	#030E	HilCorp	Gas	State	Plugged	36	30N	12W	N	8/10/1980	6620												4/28/2016

													Surface Casing			*INT Casing*			*Production Casing*					
API	**Well Name**	**Well #**	**Current Operator**	**Type**	**Lease**	**Status**	**Sec**	**TWN**	**RNG**	**UL**	**Spud Date**	**TD**	**size**	**depth**	**Sacks TOC**	**size**	**depth**	**Sacks TOC**	**size**	**depth**	**Sacks TOC**	**Perfs**	**Packer**	**PLUGGED**
30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
30-045-08783	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	1	29N	12W	F	7/9/2003	2090												12/31/1901
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-08641	PRE-ONGARD WELL	#003	Pre Ongard	Gas	Federal	Plugged	1	29N	12W	O	4/11/1998	2203												11/16/1981
30-045-08782	Cornell	5	Burlington	Gas	Federal	Plugged	1	29N	12W	G	9/30/1955	99999												4/28/1994
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996												9/15/2005
30-045-34348	Allen Com	#100	Burlington	Gas	Federal	Plugged	1	29N	12W	B	10/22/2007	138												1/22/2009
30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
30-045-08661	Dudley Cornell A	#001	BP America	Gas	Federal	Active	1	29N	12W	O	11/15/1960	6730	9.625	263	200 surf				4.5	6707	300 surf	6434-6587		
30-045-24129	Dudley Cornell A	#001E	BP America	Gas	Federal	Active	1	29N	12W	G	4/28/1980	6722	9.625	348	250 surf				4.5	6710	180 surf	6496-6629		
30-045-29538	Cornell	5R	Burlington	Gas	Federal	Active	1	29N	12W	A	4/14/1998	2225	7	131	45-53				3.5	2215	434-741	2029-2059		
30-045-29167	Hike	1	Dugan Production	Gas	Federal	Active	1	29N	12W	G	7/10/1994	3840	8.625	260	175 surf				4.5	3820	595 surf	3710-3718	3710	
30-045-31612	Cornell	2S	Southland Royalty	Gas	Federal	Active	1	29N	12W	O	7/27/1957	0	7	136	56 surf				4.5	2058	225 surf	1725-1921		
30-045-29539	Cornell	3R	Southland Royalty	Gas	Federal	Active	1	29N	12W	I	10/7/1955	0	7	131	45-53				3.5	2193	434-741	1991-2041		
30-045-32346	CORNELL	#002R	Southland Royalty	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
30-045-27635	PRE-ONGARD WELL	#500		Gas	Federal	Plugged	2	29N	12W	M														12/31/1901
30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136												1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125												2/23/1984
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235												6/25/2010
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		

30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
30-045-08711	**Pre-Ongard**		**Union Texas**	**Gas**	**Private**	**Plugged**	**3**	**29N**	**12W**	**K**	**6/25/1955**	**1940**												**11/10/1964**
30-045-60274	**WALKER 2**	**#002**	**Burlington**	**Gas**	**Private**	**Plugged**	**3**	**29N**	**12W**	**D**	**1/8/1945**	**1974**												**7/24/1998**
30-045-08823	**Walker SRC**	**1**	**Burlington**	**Gas**	**Private**	**Plugged**	**3**	**29N**	**12W**	**G**	**2/25/1943**	**2050**												**10/12/2009**
30-045-08709	**MCGRATH**	**#003**	**Burlington**	**Gas**	**Private**	**Plugged**	**3**	**29N**	**12W**	**J**	**3/4/1945**	**2040**												**3/1/2013**
30-045-30244	WALKER 100	#100	Burlington	Gas	Private	TA'd	3	29N	12W	L	3/30/2001	1948	7	126	140-168				4.5	1940	219-399	1659-1872	1597 CIBP@1609	**Tad**
30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		
30-045-08801	WALKER 1	#001	Conocophillips	Gas	Private	Active	3	29N	12W	E	4/12/1960	6620	8.625	232	150 surf				4.5	6620	300 surf	6546-6556		
30-045-24552	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**4**	**29N**	**12W**	**A**	**5/29/1981**	**0**												**12/7/1995**
30-045-08718	STANDARD	#001	Conocophillips	Gas	Federal	Active	4	29N	12W	J	11/3/1960	6600	8.625	236	175 surf				4.5	6600	250 surf	6356-6510		
30-045-29117	RIGGS	#001	Four Star Oil & Gas	Gas	Private	Active	4	29N	12W	A	6/24/1994	1900												
30-045-29118	RIGGS	#002	Four Star Oil & Gas	Gas	Private	Active	4	29N	12W	N	6/28/1994	1890												
30-045-32239	RIGGS	#003	Four Star Oil & Gas	Gas	Private	Active	4	29N	12W	C	2/21/2005	1906												
30-045-32312	RIGGS	#004	Four Star Oil & Gas	Gas	Private	Active	4	29N	12W	P	3/20/2005	2002												
30-045-08720	DEVONIAN FEDERAL	#001	Holcomb Oil & Gas	Gas	Federal	Active	4	29N	12W	K	6/23/1959	6538												
30-045-08804	FEDERAL	#001	Riggs Oil & Gas	Gas	Federal	Active	4	29N	12W	F	5/29/1959	1856												
30-045-26855	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Private**	**Plugged**	**9**	**29N**	**12W**	**B**	**3/18/1988**	**0**												**3/9/1989**
30-045-28824	ROPCO FEE FC 9	#002	XTO Energy	Gas	Private	Active	9	29N	12W	A	11/25/1992	1975												
30-045-08586	FLORANCE GAS COM B	#001	BP America	Gas	Federal	Active	9	29N	12W	H	1/20/1964	6470												
30-045-23758	**Pre-Ongard**		**Southland**	**Gas**	**Federal**	**Plugged**	**10**	**29N**	**12W**	**A**	**12/19/1980**	**1870**												**2/10/1984**
30-045-08605	**CORNELL**	**#007**	**Burlington**	**Gas**	**Federal**	**Site Released**	**10**	**29N**	**12W**	**C**	**4/20/1956**	**1807**												**7/18/1996**

30-045-08523	PRE-ONGARD WELL	#001	Pre Ongard	Water	Private	Permanently	10	29N	12W	J	8/21/1946	1871												??
30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
30-045-08601	CORNELL A	#001	BP America	Gas	Federal	Active	10	29N	12W	D	12/28/1960	6510												
30-045-24132	CORNELL A	#001E	BP America	Gas	Federal	Active	10	29N	12W	N	4/4/1980	6350												
30-045-08517	BECK A	#001	Burlington	Gas	Private	Active	10	29N	12W	J	6/12/1962	6410												
30-045-34452	BECK 29 12 10	#108	Synergy	Gas	Federal	Active	10	29N	12W	N	2/21/2008	1865												
30-045-13218	**PRE-ONGARD WELL**	**#010**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**A**		**0**												**12/31/1901**
30-045-08558	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**G**	**1/1/1940**	**0**												**4/16/1976**
30-045-08475	**CARROLL CORNELL**	**#012**	**Producing Royalties**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**P**	**11/22/1953**	**1895**												**6/13/1979**
30-045-08515	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Private**	**Plugged**	**11**	**29N**	**12W**	**L**	**11/25/1932**	**0**												**12/13/1982**
30-045-20067	**PRE-ONGARD WELL**	**#001**	**Pre Ongard**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**O**	**5/5/1967**	**0**												**4/18/1986**
30-045-22118	**PAYNE**	**#001**	**Producing Royalties**	**Gas**	**Federal**	**Plugged**	**11**	**29N**	**12W**	**A**	**7/31/1976**	**2060**												**2/13/2002**
30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
30-045-24447	FEDERAL PRI	#001E	Burlington	Gas	Federal	Active	11	29N	12W	H	10/9/1980	6581												
30-045-29945	PAYNE	#001R	Mcelvain Energy	Gas	Federal	Active	11	29N	12W	H	10/27/1999	2050												
30-045-32667	PRI	#003	Mcelvain Energy	Gas	Federal	Active	11	29N	12W	I	2/27/2005	1960												
30-045-22119	**PAYNE**	**#002**	**Mcelvain Energy**	**Gas**	**Federal**	**Plugged**	**12**	**29N**	**12W**	**F**	**7/22/1976**	**2062**												**10/30/2010**
30-045-24086	CORNELL D	#001E	BP America	Gas	Federal	Active	12	29N	12W	A	5/22/1980	6635												
30-045-33015	PRI	#001S	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	A	9/20/2005	2057												
30-045-22962	PAYNE	#002J	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	E	6/12/1978	2026												
30-045-32665	PRI	#001	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	E	2/17/2005	2090												
30-045-24283	CORNELL E	#001E	BP America	Gas	Federal	Active	12	29N	12W	F	5/12/1980	6609												
30-045-08528	CORNELL SRC	#004	Burlington	Gas	Federal	Active	12	29N	12W	K	5/25/1941	1970												

30-045-08444	CORNELL E	#001	BP America	Gas	Federal	Active	12	29N	12W	M	9/28/1962	6562												
30-045-32666	PRI	#002	Mcelvain Energy	Gas	Federal	Active	12	29N	12W	M	2/8/2005	2010												
30-045-09117	PRE-ONGARD WELL	#001	ONGARD WELL OPERATOR	Gas	Private	Plugged	25	30N	12W	M	4/13/1953	0												5/26/1958
30-045-26121	ROWLAND GAS COM	#001E	[5380] XTO ENERGY, INC	Gas	Private	Active	25	30N	12W	M	3/19/1985	6560												
30-045-29707	RUBY CORSCOT A	#001	[5380] XTO ENERGY, INC	Gas	Private	Active	25	30N	12W	N	9/25/1999	2007												
30-045-31641	RUBY CORSCOT A	#002	[5380] XTO ENERGY, INC	Gas	Private	Active	25	30N	12W	E	6/2/2003	2076												
30-045-29414	PRE-ONGARD WELL	#001	ONGARD WELL OPERATOR	Gas	Private	Plugged	26	30N	12W	G	6/21/1953	0												12/31/1901
30-045-09130	PRE-ONGARD WELL	#003	ONGARD WELL OPERATOR	Gas	Private	Plugged	26	30N	12W	O		0												3/12/1954
30-045-09165	PAUL PALMER D	#001	[5073] CONOCO INC	Gas	Private	Plugged	26	30N	12W	L	10/11/1961	99999												3/17/1995
30-045-30456	KATY COM	#002	MERRION OIL & GAS CORP	Gas	Private	Plugged	26	30N	12W	P	4/27/2001	2028												8/10/2015
30-045-09177	PAUL PALMER	#001	MERRION OIL & GAS CORP	Gas	Private	Plugged	26	30N	12W	L	9/13/1961	3509												8/14/2015
30-045-30027	PADILLA	#001	[5380] XTO ENERGY, INC	Gas	Private	Active	26	30N	12W	F	1/15/2004	1953												
30-045-32243	PADILLA	#002	[5380] XTO ENERGY, INC	Gas	Private	Active	26	30N	12W	N	5/13/2004	2153												
30-045-09200	PRE-ONGARD WELL	#001	ONGARD WELL OPERATOR	Gas	Private	Plugged	27	30N	12W	L	3/30/1947	0												3/17/1959
30-045-13120	DUFF GAS COM B	#001	AMERICA PRODUCTION	Gas	Private	Plugged	27	30N	12W	P	2/28/1962	1950												5/30/1996
30-045-30544	DUFF GAS COM	#003	[5380] XTO ENERGY, INC	Gas	Private	Active	27	30N	12W	P	4/1/2001	5167												
30-045-09134	DUFF GAS COM C	#001	[5380] XTO ENERGY, INC	Gas	Private	Active	27	30N	12W	M	1/30/1964	6365												
30-045-26076	DUFF GAS COM C	#001E	[5380] XTO ENERGY, INC	Gas	Private	Active	27	30N	12W	P	9/20/1984	6500												
30-045-29664	DUFF GAS COM C	#002	[5380] XTO ENERGY, INC	Gas	Private	Active	27	30N	12W	M	10/16/1998	1856												
30-045-31284	DUFF GAS COM C	#004	[5380] XTO ENERGY, INC	Gas	Private	Active	27	30N	12W	P	1/27/2003	1996												
30-045-34235	GILBREATH	#002	STAR OIL & GAS CO	Gas	Private	Active	28	30N	12W	O	4/30/2008	2170												
30-045-08999	PRE-ONGARD WELL	#002	ONGARD WELL OPERATOR	Gas	Private	Plugged	33	30N	12W	J	7/10/1946	0												6/4/1982
30-045-09037	HARGIS	#001	MCGEE OIL & GAS ONSHORE LP	Gas	Private	Plugged	33	30N	12W	G	9/15/1944	1808												2/23/1994
30-045-08998	JULANDER	#002	PRODUCTION CORP	Gas	Private	Plugged	33	30N	12W	I	4/1/1946	1936												4/12/1999
30-045-09001	MADDOX	#001	CONOCOPHILLIPS COMPANY	Gas	Private	Active	33	30N	12W	J	9/21/1961	6400												
30-045-29023	REDFERN	#002	STAR OIL & GAS CO	Gas	Private	Active	33	30N	12W	H	12/5/1993	1950												

30-045-32236	REDFERN	#003	STAR OIL & GAS CO	Gas	Private	Active	33	30N	12W	I	3/8/2005	1993												
30-045-28912	SHIOTANI	#007	STAR OIL & GAS CO	Gas	Private	Active	33	30N	12W	K	12/31/1992	1782												
30-045-09052	**PRE-ONGARD WELL**	**#001**	**ONGARD WELL OPERATOR**	**Gas**	**Federal**	**Plugged**	**34**	**30N**	**12W**	**F**	**9/11/1945**	**0**												**1/22/1964**
30-045-08939	**PRE-ONGARD WELL**	**#001**	**ONGARD WELL OPERATOR**	**Gas**	**Private**	**Plugged**	**34**	**30N**	**12W**	**L**	**1/1/1945**	**0**												**6/4/1982**
30-045-08950	**HUDSON**	**2**	**Burlington**	**Gas**	**Federal**	**Plugged**	**34**	**30N**	**12W**	**P**	**7/17/1946**	**2137**												**9/26/2008**
30-045-08945	**MCGRATH C**	**#001**	**Burlington**	**Gas**	**Federal**	**Plugged**	**34**	**30n**	**12W**	**p**	**2/7/1963**	**6637**												**4/29/2009**
30-045-25923	**MCGRATH**	**#004**	**BURLINGTON RESOURCES OIL**	**Salt Water Disposal**	**Federal**	**Plugged**	**34**	**30N**	**12W**	**B**	**9/4/1984**	**4700**												**7/25/2013**
30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		**TA'd 3/5/14**
30-045-31756	JULANDER	#100	BURLINGTON RESOURCES OIL &	Gas	Private	Shut In	34	30N	12W	D	7/13/2005	1895												
30-045-33411	JULANDER	#100S	BURLINGTON RESOURCES OIL &	Gas	Federal	Shut In	34	30N	12W	M	3/7/2006	2075												
30-045-09071	DUFF GAS COM	#001	[5380] XTO ENERGY, INC	Gas	Private	Active	34	30N	12W	D	1/30/1962	6425												
30-045-20140	**Pre-Ongard**		**Southland**	**Gas**	**Federal**	**Plugged**	**35**	**30N**	**12W**	**L**	**9/7/1967**	**DH**												**6/9/1982**
30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
30-045-31355	CARNAHAN COM	#001Y	HOLCOMB OIL & GAS INC	Gas	Private	Active	35	30N	12W	A	2/15/2003	2150												
30-045-28177	**FC STATE COM**	**#024**	**Burlington**	**Gas**	**State**	**Plugged**	**36**	**30N**	**12W**	**M**	**10/9/1990**	**6608**												**3/26/2013**
30-045-12188	NEW MEXICO COM N	#001	BURLINGTON RESOURCES OIL &	Gas	State	Active	36	30N	12W	E	1/2/1966	6562												
30-045-31074	NEW MEXICO COM N	#100	BURLINGTON RESOURCES OIL &	Gas	State	Shut In	36	30N	12W	A	8/29/2002	2135												
30-045-08986	STATE COM AH	#030	CONOCOPHILLIPS COMPANY	Gas	State	Active	36	30N	12W	I	6/14/1961	6645												
30-045-24037	STATE COM AH	#030E	CONOCOPHILLIPS COMPANY	Gas	State	Plugged	36	30N	12W	N	8/10/1980	6620												

														Surface Casing			*INT Casing*			*Production Casing*					
	API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC	Perfs	Packer	PLUGGED
x	30-045-08851	ALLEN A	#001	BP America	Gas	Private	Active	1	29N	12W	D	3/12/1961	6785	8.265	264	200 surf				4.5	6785	300 surf	6518-6718		
x	30-045-26214	ALLEN A	#001E	BP America	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8.625	318	225 surf				5.5	6622	820 surf	6425-6602		
x	30-045-32346	CORNELL	#002R	Energen Resources	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
x	30-045-32241	BECK	#001R	Burlington	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
x	30-045-33811	BECK	#001S	Burlington	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
x	30-045-31580	CORNELL COM	#500	Burlington	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf	6.25	2126		4.5	2126	258 surf	1658-1878		
x	30-045-08714	CORNELL SRC	#007	Burlington	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf	5.5	1978		3.5	2106	250 surf	1976-2010		
x	30-045-08704	MCGRATH B	#001	Burlington	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8.625	318	225 surf				4.5	1865	1065 surf	6489-6596		
	30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8.625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TA'd
x	30-045-08839	YOUNG	#001	Burlington	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8.625	307	275 surf				4.5	6739	700 surf	6446-6644		
x	30-045-33580	MCGRATH	#003S	Burlington	Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf				4.5	2112	289 surf	1692-1904		
x	30-045-08712	MCGRATH A	#001	Burlington	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8.625	307	250 surf				4.5	6688	500 surf	6432-6524		
x	30-045-32931	WALKER	#100S	Burlington	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf				4.5	2117	238 surf	1621-1885		NOI to PA 5/2014
x	30-045-23889	BECK A	#001E	Burlington	Gas	Federal	Active	10	29N	12W	B	1/5/1981	6514	8.625	240	150 surf				4.5	6514	765 surf	6277-6454		
x	30-045-30381	CORNELL	#100	Burlington	Gas	Federal	Active	10	29N	12W	B	1/7/2003	1968	7	147	55 surf				4.5	1959	229 surf	1543-1704 1744-1800		
x	30-045-08615	CORNELL	#006	Thompson Engr & Prod	Gas	Federal	Active	11	29N	12W	C	11/7/1955	1839	8.625	106	70 surf	5.5	1811		3.5	2022	181 surf	1811-1839		
x	30-045-31581	CORNELL	#101	Burlington	Gas	Federal	Active	11	29N	12W	D	10/7/2003	2008	7	140	35 surf				4.5	2000	270 surf	1726-1764		
x	30-045-13092	CORNELL C	#001	BP America	Gas	Federal	Active	11	29N	12W	D	12/6/1961	6604	8.625	250	150 surf				4.5	6604	300 surf	6298-6483		
x	30-045-26141	DUFF GAS COM	#001E	Burlington	Gas	Federal	TA'd	34	30N	12W	G	11/20/1984	6608	8.625	316	295 surf				4.5	6608	1000 surf	6396-6576 04'RC to FC 1492-1870		TA'd 3/5/14
x	30-045-08946	CARNAHAN COM	#001	Holcomb Oil & Gas	Gas	Private	Active	35	30N	12W	P	12/19/1960	6778	8.625	301	200 surf				4.5	6760	445 surf	6521-6708 94 RC to FC 1824-2037		
x	30-045-25844	CARNAHAN COM	#002	Merrion Oil & Gas	Gas	Private	Active	35	30N	12W	P	6/15/1984	6780	8.625	230	170 surf				4.5	6777	1425 surf	6529-6714		
x	30-045-11770	HUDSON J	#003	Burlington	Gas	Federal	Active	35	30N	12W	E	7/22/1966	6750	8.625	306	250 surf				4.5	6750	750 surf	6460-6680 01' RC to FC 1784-1994		
	30-045-28177	FC STATE COM	#024	Burlington	Gas	State	Plugged	36	30N	12W	M	10/9/1990	6608	8.625	316	250 surf				4.5	6609	6000 surf	1492-1870		3/26/2013
	30-045-08945	MCGRATH C	#001	Burlington	Gas	Federal	Plugged	34	30n	12W	p	2/7/1963	6637	8.625	323	225 surf				4.5	6637	925 surf	6367-6576		4/29/2009

30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136	13 & 10.75	550 & 864	2 sx mud 4 sx mud	8.625	1526	5 sx mud	5.50 & 3.50	2020 2136	12 sx mud 140 surf	2020-2136 2012-2078		1998
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125												2/23/1984
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged, Not Released	2	29N	12W	J	3/23/2001	2235	8.625	53	12 surf				2.875	2228	425 surf	2010-2157		6/25/2010
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-08656	Cornell	2	Energen Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996	8.625	97	75 surf				5.5	1950	100 surf	1711-1936		9/15/2005
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050	16	21	20 surf	5.5	1930		3.5	2050	175 surf	1938-1974		10/12/2009
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940												11/10/1964
30-045-23758	Pre-Ongard		Southland	Gas	Federal	Plugged	10	29N	12W	A	12/19/1980	1870												2/10/1984
30-045-08950	HUDSON	2	Burlington	Gas	Federal	Plugged	34	30N	12W	P	7/17/1946	2137	15.5	38	20 surf	10 & 8.625	1217 1618	99 surf	5.5	1961	40 surf	1728-1938 1962-2008	2128	9/26/2008
30-045-08955	Pre-Ongard		Aztec O&G	Gas	Private	Plugged	34	30N	12W	N	11/1/1944	1965												10/29/1977
30-045-20140	Pre-Ongard		Southland	Gas	Federal	Plugged	35	30N	12W	L	9/7/1967	DH												6/9/1982
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf	6.25	2210		4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf	5.5	1960		3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040	13.375	675	2 surf	8.625 INT 1 5.5 INT 2	1460 1928	4 surf 58 surf	3.5	2011	110 surf	1872-1912 1922-1937	1871-1876	3/1/2013

2018 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 2-MILE AOR

Sec	TWN	RNG	UL	
1	29N	12W	ALL	
2	29N	12W	ALL	
3	29N	12W	ALL	
4	29N	12W	ACFJKNP	
9	29N	12W	ABH	
10	29N	12W	ABCDIJN	
11	29N	12W	ACDGHILOP	
12	29N	12W	AEFKM	
25	30N	12W	EMN	
26	30N	12W	FGLNOP	
27	30N	12W	LMP	
28	30N	12W	O	
33	30N	12W	GHIJK	
34	30N	12W	ALL	
35	30N	12W	ALL	
36	30N	12W	AEIMN	

Radius expanded to 2 miles for permit renewal requirements.

7 Wells were Plugged & Abandoned since last renewal in 2012.

s	t	r	ul
1	29N	12W	A
1	29N	12W	B
1	29N	12W	D
1	29N	12W	G
1	29N	12W	G
1	29N	12W	G
1	29N	12W	I
1	29N	12W	L
1	29N	12W	M
1	29N	12W	M
1	29N	12W	O
1	29N	12W	O
2	29N	12W	C
2	29N	12W	D
2	29N	12W	D
2	29N	12W	E
2	29n	12w	g
2	29N	12W	G
2	29n	12w	j
2	29N	12W	J
2	29N	12W	J
2	29N	12W	L
2	29N	12W	M
2	29N	12W	N
2	29N	12W	P
3	29N	12W	B
3	29N	12W	D
3	29N	12W	E
3	29N	12W	F
3	29N	12W	G
3	29N	12W	I
3	29N	12W	J
3	29N	12W	K
3	29N	12W	L
4	29N	12W	A
4	29N	12W	A
4	29N	12W	C
4	29N	12W	F
4	29N	12W	J
4	29N	12W	K
4	29N	12W	N
4	29N	12W	P
9	29N	12W	A
9	29N	12W	B
9	29N	12W	H
10	29N	12W	A

10	29N	12W	B
10	29N	12W	B
10	**29N**	**12W**	**C**
10	29N	12W	D
10	29N	12W	J
10	29N	12W	J
10	29N	12W	N
10	29N	12W	N
11	**29N**	**12W**	**A**
11	**29N**	**12W**	**A**
11	29N	12W	C
11	29N	12W	D
11	29N	12W	D
11	**29N**	**12W**	**G**
11	29N	12W	H
11	29N	12W	H
11	29N	12W	I
11	**29N**	**12W**	**L**
11	**29N**	**12W**	**O**
11	**29N**	**12W**	**P**
12	29N	12W	A
12	29N	12W	A
12	29N	12W	E
12	29N	12W	E
12	**29N**	**12W**	**F**
12	29N	12W	F
12	29N	12W	K
12	29N	12W	M
12	29N	12W	M
25	30N	12W	E
25	**30N**	**12W**	**M**
25	30N	12W	M
25	30N	12W	N
26	30N	12W	F
26	**30N**	**12W**	**G**
26	**30N**	**12W**	**L**
26	**30N**	**12W**	**L**
26	30N	12W	N
26	**30N**	**12W**	**O**
26	**30N**	**12W**	**P**
27	**30N**	**12W**	**L**
27	30N	12W	M
27	30N	12W	M
27	**30N**	**12W**	**P**
27	30N	12W	P
27	30N	12W	P
27	30N	12W	P

28	30N	12W	O
33	**30N**	**12W**	**G**
33	30N	12W	H
33	**30N**	**12W**	**I**
33	30N	12W	I
33	**30N**	**12W**	**J**
33	30N	12W	J
33	30N	12W	K
34	**30N**	**12W**	**B**
34	30N	12W	D
34	30N	12W	D
34	**30N**	**12W**	**F**
34	30N	12W	G
34	**30N**	**12W**	**L**
34	30N	12W	M
34	**30N**	**12W**	**P**
34	**30n**	**12W**	**p**
35	30N	12W	A
35	30N	12W	E
35	**30N**	**12W**	**L**
35	30N	12W	P
35	30N	12W	P
36	30N	12W	A
36	30N	12W	E
36	30N	12W	I
36	**30N**	**12W**	**M**
36	30N	12W	N

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM014375

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
14080018221

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
CORNELL A 1E

2. Name of Operator
BP AMERICA PRODUCTION COMPANY
Contact: TOYA COLVIN
E-Mail: Toya Colvin@bp.com

9. API Well No.
30-045-24132-00-S1

3a. Address
501 WESTLAKE PARK BLVD. THREE ELDRIGE PLACE
HOUSTON, TX 77079

3b. Phone No. (include area code)
Ph: 281.892.5369

10. Field and Pool or Exploratory Area
BASIN DAKOTA

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 10 T29N R12W SESW 0910FSL 1760FWL
36.736191 N Lat, 108.088867 W Lon

11. County or Parish, State
SAN JUAN COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
BP	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Please see the attached P&A operations performed on the subject well January 2018.

14080018221

OIL CONS. DIV DIST. 3

FEB 13 2018

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #402766 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by JACK SAVAGE on 02/07/2018 (17AE0306SE)

Name *(Printed/Typed)* TOYA COLVIN — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 01/31/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED — JACK SAVAGE / Title PETROLEUM ENGINEER — Date 02/07/2018

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Farmington

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCD

BP America Production Co.

Plug And Abandonment End Of Well Report

Cornell A 1E

910' FSL & 1760' FWL, Section 10, T29N, R12W

San Juan County, NM / API 30-045-24132

Work Summary:

1/12/18 Made BLM, and NMOCD P&A operations notifications at 9:00 AM MST.

1/15/18 MOL and R/U P&A unit. Checked well pressures: Tubing: N/A, Casing: 10 psi, Bradenhead: 80 psi. Blew down well. N/D wellhead and N/U BOP. P/U 3500' of tubing with casing scraper and bit off of tubing float. Shut-in well for the day.

1/16/18 Checked well pressures: Tubing 0 psi, Casing: 0 psi, Bradenhead: 0 psi. Blew down well. TIH with casing scraper to 5960' and tagged hard scale. Rotated through 20' of scale and stopped making headway with casing scraper. TOH and P/U string mill. TIH and swivel-up to start milling tight spot on 1-17-18.

1/17/18 Milled 90' of hard scale down to top perforation at 6127'. Circulated bottoms up and TOH with mill. **P/U CR, TIH and set at 6077'.** Loaded tubing with 25 bbl of fresh water and pressure tested to 1000 psi in which it successfully held pressure. Stung out of CR and circulated hole with 100 bbl fresh water until returns were clean. Attempted to pressure test casing to 800 psi in which it failed to hold adequate pressure. R/U cementing services and pumped balanced **Plug #1: (Dakota Perforations and Formation Top 6077'-5846', 24 Sacks Class B Cement)** Mixed 24 sx Class B cement and spotted a balanced plug to cover Dakota perforations and formation top. R/D cementing services and shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.

1/18/18 TOH, L/D stinger and P/U cementing sub. TIH with cementing sub and tagged plug #1 top at 5846'. Pressure tested casing to 800 psi in which it failed to hold adequate pressure. Pumped plug #2 at 5330' **Plug #2: (Gallup Formation Top 5330'-5066', 20 Sacks Class B Cement)** Mixed 20 sx Class B cement and spotted a balanced plug to cover Gallup formation top. WOC 4 hours. TIH and tagged plug #2 top at 5066'. PUH and pumped plug #3 at 4418'. **Plug #3: (Mancos and Pt. Lookout Formation Tops 4418'-3907', 52 Sacks Class B Cement)** Mixed 52 sx Class B cement and spotted a balanced plug to cover Mancos and Pt. Lookout formation top. Shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.

1/19/18 TIH and tagged plug #3 top at 3907'. TOH with tubing and R/U wireline services. Ran CBL from top of plug #3 at 3907' to surface. CBL results showed no cement behind casing from 3675' to surface. R/U wireline services. RIH and perforated squeeze holes at 3294'. TIH with CR and set at 3244'. Stung out of CR and pressure tested casing to 800 psi in which it failed to hold pressure. **Plug #4: (Mesa Verde(Cliffhouse)Formation Top 3294'-3074', 66 Sacks Class B Cement)** RIH with 4-1/2" CR and set at 3244'. Mix 66 sx Class B cement. Squeezed 50 sx outside casing leaving 16 sx inside casing to cover Mesa Verde(Cliffhouse) formation top. TOH with tubing. Shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.

1/22/18 TIH with cementing sub and tagged cement at 3074'. TOH and R/U wireline services. RIH and perforated squeeze holes at 2705'. P/U CR, TIH and set at 2655'. Stung out of CR and pressure tested casing to 800 psi in which it failed to hold pressure. **Plug #5: (Chacra Formation Top 2705'-2553', 50 Sacks Class B Cement)** Mix 50 sx Class B cement. Squeezed 43 sx outside casing leaving 7 sx inside casing to cover Chacra formation top . WOC 4 hours. TIH with cementing sub and tagged cement at 2553'. Pressure tested casing to 800 psi in which it successfully held pressure. Pressure test witnessed by BLM inspector Ron Chavez. Shut-in well for the day.

1/23/18 TOH with tubing. R/U wireline services. RIH and perforated squeeze holes at 1773'. P/U CR, TIH and set at 1722'. R/U cementing services for 1-24-18. Shut-in well for the day.

1/24/18 R/U cementing services and pumped **Plug #6: (Pictured Cliffs Formation Top 1773'-1573', 74 Sacks Class B Cement)** RIH and perforate 3 squeeze holes at 1773'. RIH with 4-1/2" CR and set at 1722'. Mix 74 sx Class B cement. Squeezed 62 sx outside casing leaving 12 sx inside casing to cover Pictured Cliffs formation top. R/U wireline services. RIH and perforated squeeze holes at 1339'. P/U CR, TIH and set at 1286'. R/U cementing services and pumped **Plug #7:**

(Fruitland Formation Top 1339'-1189', 77 Sacks Class B Cement). RIH with 4-1/2" CR and set at 1286'. Mix 77 sx Class B cement. Squeezed 65 sx outside casing leaving 12 sx inside casing to cover Fruitland formation top. Put pressure gauge on Bradenhead and monitored for 2 hours. R/U wireline services. RIH and perforated at 467'. Circulated 54 bbls of cement around Bradenhead and got good cement returns to surface. N/D BOP and cut-off wellhead. Ran tally tape down hole and tagged cement at 11' inside surface casing, and 45' down in production casing. RIH with 1" poly pipe and topped well off with 36 sx of cement- **Plug #8: (Kirtland, Ojo Alamo Formation Tops, Surface Shoe 467'-surface, 90 Sacks Class B Cement, 36 Sacks for top-off)** Installed P&A marker per BLM regulations. Ron Chavez was BLM inspector on location. R/D MOL.

Wellbore Diagram

Cornell A 1E
API #: 3004524132
San Juan, New Mexico

Plug 8
467 feet - Surface
467 feet plug
90 sacks of Class B Cement
(Top off with 36 sacks)

Plug 7
1339 feet - 1189 feet
150 feet plug
Squeeze 65 sacks through perfs
Leave 12 sacks in casing

Plug 6
1773 feet - 1573 feet
200 feet plug
Squeeze 62 sacks through perfs
Leave 12 sacks in casing

Plug 5
2705 feet - 2553 feet
152 feet plug
Squeeze 43 sacks through perfs
Leave 7 sacks in casing

Plug 4
3294 feet - 3074 feet
220 feet plug
Squeeze 50 sacks through perfs
Leave 16 sacks in casing

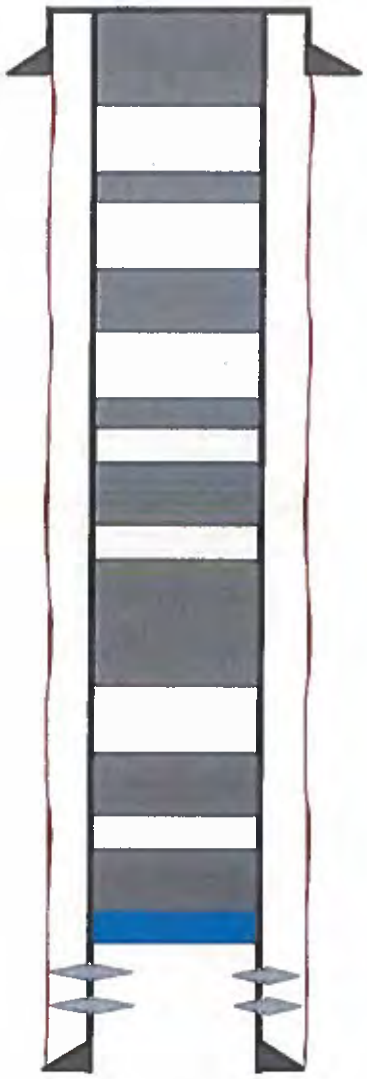
Plug 3
4418 feet - 3907 feet
511 feet plug
52 sacks of Class B Cement

Plug 2
5330 feet - 5066 feet
264 feet plug
20 sacks of Class B Cement

Plug 1
6077 feet - 5846 feet
231 feet plug

Surface Casing
8.625" 24# @ 300 ft

Formation
Ojo Alamo - 300 feet
Pictured Cliffs - 1660 feet
Lewis - 1840 feet
Cliffhouse -3250 feet
Menefee - 3320 feet
Point Lookout -402 feet
Mancos - 4400 feet
Gallup - 5300 feet
Greenhorn - 6060 feet
Dakota - 6170 feet



Retainer @ 6077 feet

Production Casing
4.5" 10.5# @ 6370 ft

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMSF065557A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
SW97

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
CORNELL E 1

2. Name of Operator
BP AMERICA PRODUCTION COMPANY
Contact: TOYA COLVIN
E-Mail: Toya.Colvin@bp.com

9. API Well No.
30-045-08444-00-S1

3a. Address
501 WESTLAKE PARK BLVD. THREE ELDRIGE PLACE
HOUSTON, TX 77079

3b. Phone No. (include area code)
Ph: 281.892.5369

10. Field and Pool or Exploratory Area
BASIN DAKOTA

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 12 T29N R12W SWSW 0790FSL 0900FWL
36.735352 N Lat, 108.055862 W Lon

11. County or Parish, State
SAN JUAN COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Please see the attached P&A operations performed on the subject well June 2017.

OIL CONS. DIV DIST. 3

JUL 20 2017

14. I hereby certify that the foregoing is true and correct

Electronic Submission #381260 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by ABDELGADIR ELMADANI on 07/18/2017 (17AE0211SE)

Name *(Printed/Typed)* TOYA COLVIN — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 07/13/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED — ABDELGADIR ELMANDANI — Title PETROLEUM ENGINEER — Date 07/18/2017

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Farmington

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(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

NMOCD

5

BP AMERICA
PRODUCTION
COMPANY

Cornell E #1
API:30-045-08444

Well Plugging Report

Work Detail

06/15/2017

Travel to location.
Service and start equipment. Held JESA.
LOTO with Ernie Cardin, BP representative. Spot in and RU rig. Check pressures: SITP 40#, SICP #160, SIBHP 25#.
Lay out relief lines to pit and blow well down. Note: casing and tubing blew down immediately; then tubing starting flowing back heavy drilling mud. Pump 30 bbls down tubing and casing started flowing after pumping 1 bbl.
ND WH. NU BOP and tongs.
PU on tubing and TOH with total 204 joints 2-3/8" EUE tubing, 2 - 6' and 1-8' subs. Total tally 6356'. Note: first 30 stands flowing water; used witches hat to catch the water.
PU 4.5" string mill and TIH to 4000'. SI well. SDFD. Secure location.
Travel back to yard.

06/16/2017

Travel to location.
Service and start equipment. Held JESA.
Check well pressures: SITP and SICP 160#,SIBHP 15#. Well blew down immediately. Function test pipe rams. Finish TIH w/mill to 6300'. TOH and LD mill.
PU 4.5 WD cement retainer and TIH; set at 6288'. P/T tbg to 1500#,held OK. Sting out of CR. Circulate casing clean with 120 bbls of water. Note: circulated drilling mud in returns. Attempt to P/T 4.5" csg; bled down from 750-500 in 2 minutes. Establish injection rate 1.5 bpm at 750#.
Plug #1 with CR at 6288' spot 14 sxs (16.52 cf) Class B cement 15.6# from 6288 to 6160 to cover the Dakota perforations and top. TOH with tubing and LD setting tool.
Held JSEA. Run CBL from 6050 to surface; send to all appropriate personnel.

06/21/2017

Rode rig and spot equipment to location.
JSEA. RU rig and equipment.
Check well pressures: SITP 460#,SICP 420# SIBHP 15#. Lay out relief lines to pit and blow down well in 1 minute. NU BOP and floor. TIH with tubing and tag Plug #1 low at 6253' (Note: CR set at 6288').
Pump 20 bbls ahead. Pump Plug #1a with 14 sxs 15.6# Class B cement (16.52 cf) from 6253-6153; estimated TOC 6072'.
TOH with tubing. SI well and WOC overnight.
Travel back to yard.

06/22/2017

Travel to location
Service and start rig, JSEA

Check well pressures: SITP 500#,SICP 400# SIBHP 15#. Blow down in about 30 seconds. TIH and tag plug #1a low at 6253'. Plug #1b with 32 sxs (37.76 cf) with 2 % calc. 15. 6# Class B cement from 6253 to 5839'.
TOH with tubing. SIW and WOC.
TIH and tag plug #1b at 5990'. Attempt to PSI test casing, same bleed off. TOH with tubing.
JSEA. Perforate 3 3-1/" HSC squeeze holes at 5534'.
PU WD 4.5" cement retainer; TIH and set CR at 5484'. Sting out. Load csg with 1 bbl. Attempt to PSI test casing; established injection rate 1.5 bpm at 750 psi. Sting in and establish injection rate 1.5 bpm at 1000 psi.
Plug #2 (Gallup) with 51 sxs (60.18 cf) 15.6# Class B cement from 5534' – 5362'; squeeze 39 sxs outside, 4 sxs below CR and 8 sxs above . TOH and WOC overnight.
Travel back to yard.

06/23/2017 Travel to loc.
Service and start equipment. JSEA.
Check well pressures: SICP 430#,SITP 480#,SIBHP 15#. Blow down well to pit. TIH with tbg and tag TOC at 5362'. LD tubing. Attempt to pressure test csg, test failed. TOH.
JSEA. Perforate 3 3-1/8" squeezes holes at 4630'.
PU 4.5" WD cement retainer and TIH; set CR at 4577'. Sting out and attempt to pressure test casing; same leak. Sting in and establish rate 1.5 BPM at 750#.
Plug #3 (Mancos) with 51 sxs (60.18 cf) with 2% CaCl2 15.6# Class B cement from 4630'-4473'; squeeze 39 sxs outside,4 sxs below CR,8 sxs on top. PUH. SI well. WOC (cut and slip tubing line).
TIH and tag Plug #3 at 4473'. Attempt to pressure test casing, same leak. PUH.
Perforate 3 3-1/8" HSC squeeze holes at 3500'.
PU WD 4.5"cement retainer and TIH; set CR at 3457'. Attempt to pressure test csg above CR; same leak. Sting in and establish rate 1.5 BPM at 750#. Plug #4 (Mesaverde) with 51 sxs (60.18 cf) 15.6# Class B cement 3500'-3336'. TOH. SIW and WOC over weekend. Secure well.
Travel back to yard

06/26/2017
Travel to location.
Check well pressures: Tbg and Csg 0# and bradenhead 15#. TIH and tag cement at 3336'. Pressure test 4.5 csg to 800#, held OK. TOH and LD setting tool.
JSEA. Perforate 3 3-1/8" HSC squeeze holes at 2946'. Establish injection rate 1.5 BPM at 900#
PU 4.5" WD CR and TIH; set CR at 2895'. Plug #5 (Chacra) mix 51 sxs (60.18 cf) 15.6# Class B cement from 2946' to 2846'; squeeze 39 sxs outside, 4 sxs below CR and 8 sxs on top.
LD tbg to 1930'. Plug #6 (PC) spot 39 sxs (46.02 cf) 15. 6# Class B cement from 1930' to 1427'. LD tbg to 1427'and reverse circulate csg clean w/15 bbls.
POOH w/22 stands and LD setting tool
JSEA. Perf 3 3-1/8" at 1405'. Establish injection rate 2BPM at 750#.
PU WD CR and TIH; set at 1365'. Plug #6A (Fruitland) mix 51 sxs (60.18 cf) 15.6# Class B cement from 1405'-1305'; squeeze 39 sxs, outside,4 sxs below CR,8 sxs on top.
TOH and LD setting tool. JSEA. Perforate 3 3-1/8" HSC squeeze holes at 750'. Establish rate 2 BPM at 500#.
PU 4.5" WD CR and TIH; set at 700'. Plug #7 (Kirtland and Ojo Alamo tops) mix 134 sxs (158.12 cf) 15.6# Class B cement from 750' to 470'; Squeeze 108 sxs outside,4 sxs below CR,22 sxs on top.
TOH and LD setting tool.
JSEA. Perforate 3 3-1/8" HSC squeeze holes at 301'. Establish circulation and

circulate clean with 25 bbls.
ND BOP. NU wellhead. Plug #8 (Surface) mix 105 sxs (123.9 cf) 15.6# Class B cement from 301 to surface; circulate good cement out bradenhead. SI BH and squeeze 10 sxs. SI well with 500# pressure. Wash up equipment and WOC overnight.
Travel back to yard.

06/27/2017

Service and start equipment. JSEA. Open up well; no pressures. RD Floor. ND wellhead and tag TOC in 4.5 csg at 9'. Dig out wellhead.
JSEA. Monitor wellhead. Write Hot Work Permit. Cut off wellhead with air saw. Tag TOC in 4.5 at 6' and in annulus at 5'. No top-off required per John Hagstrom, BLM representative on location. Weld on plate and P&A Marker.
Rig down Pump Truck and Rig. Clean up location. MOL.

Darrell Priddy and John Hagstrom, BLM representatives, were on location and approved all procedure changes.

Cornell E 001
Proposed P&A

Basin Dakota

790' FSL & 900' FWL, Section 12M, T-29-N, R-12-W , San Juan County, NM

API 30-045-08444

Today's Date. 1/31/17

Spud: 9/28/62
Comp: 10/11/62
Elevation: 5689' Gl
5701' KB

12-1/4" hole

Ojo Alamo @ 585'

Kirtland @ 700'

Fruitland @ 1355'

Pictured Cliffs @ 1865'

Chacra @ 2896'

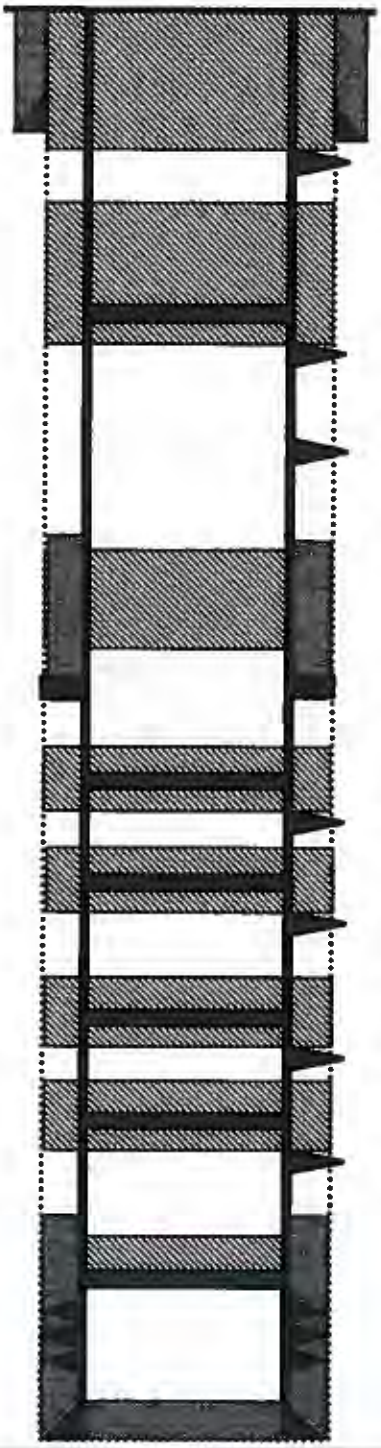
Mesaverde @ 3450'

Mancos @ 4580'

Gallup @ 5484'

7.875" hole

Dakota @ 6210'



TD 6110'
PBTD 6073'

8-5/8", 24#, J-55 Casing set @ 251'
Cement with 200 sxs, circulated

Perforate @ 301'

Plug #8: 301' – 0'
Class B cement, 105 sxs, 123.9 cf, 15 6#. Squeeze 10 sxs. Tag 6' Insdide and 5' In annulus.

Plug #7: 750' – 470'
Class B cement, 134 sxs, 158.12 cf, 15.6#. 108 sxs outside, 4 sxs below, 22 sxs above

Set CR @ 700'

Perforate @ 750'

Set CR @ 1365'

Perforate @ 1405'

Plug #6a: 1405' – 1305'
Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4 sxs below, 8 sxs above

TOC unknown, did not circulate

Plug #6: 1930' – 1427'
Class B cement, 39 sxs, 46.02 cf

DV Tool @ 1957'
2nd Stage: Cement with 50 sxs

Set CR @ 2895'

Perforate @ 2946'

Plug #5: 2946' – 2846'
Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4 sxs below, 8 sxs above.

Set CR @ 3457'

Perforate @ 3500'

Plug #4: 3500' - 3336'
Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4 sxs below, 8 sxs above. Tag 3336'.

Set CR @ 4577'

Perforate @ 4630'

Plug #3: 4630' – 4473'
Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4 sxs below, 8 sxs above. Tag 4473'

Set CR @ 5484'

Perforate @ 5534'

TOC unknown, did not circulate

Plug #2: 5534' – 5362'
Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4 sxs below, 8 sxs above. Tag 5362'

Set CR @ 6288'

Plug #1b: 6253' – 5990'
Class B cement, 32 sxs, 37.76 cf, 15.6#. Tag TOC at 5990'

Dakota Perforations:
6338' – 6446'

Plug #1a: 6253' – 6253'
Class B cement, 14 sxs, 16.52 cf, 15.6#

Plug #1: 6288' – 6253'
Class B cement, 14 sxs, 16.52 cf, 15.6#

4.5", 9.5#, J-55 Casing set @ 6546'
1st Stage: Cement with 60 sxs

RECEIVED
MAY 03 2017
Farmington Field Office
Bureau of Land Management

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on page 2

5. Lease Serial No.: **SF-076465**

6. If Indian, Allottee or Tribe Name:

7. If Unit of CA/Agreement, Name and/or No:

1. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other

8. Well Name and No.: **Cornell SRC 4**

2. Name of Operator: **Burlington Resources Oil & Gas Company LP**

9. API Well No: **30-045-08528**

3a. Address: **PO Box 4289, Farmington, NM 87499**

3b. Phone No. (include area code): **(505) 326-9700**

10. Field and Pool or Exploratory Area: **Fulcher Kutz Pictured Cliffs**

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*: **Surface Unit K (NESW), 2200' FSL & 1980' FWL, Sec. 12, T29N, R12W**

11. Country or Parish, State: **San Juan , New Mexico**

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[ ] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[X] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[ ] Change Plans	[X] Plug and Abandon	[ ] Temporarily Abandon	
[ ] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once Testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

3/22/2017 - Contacted AG/BLM & Brandon Powell/OCD to update that the 3 1/2" csg can not be pulled per procedure as it appears to be welded inside the 4 1/2" WH. The 3 1/2"x5 1/2" annulus was hot-tapped 3/21/17 & there is no pressure.
3/24/2017 #1- Contacted Brandon Powell/OCD to request permission to decrease excess to 50%. Rec'vd verbal OK.
3/24/2017 #2 - Contacted Jack Savage/BLM & Brandon Powell/OCD re tagged plug, TOC @ 672'. Propose to D/O to approx. 780'; perf @ 770'. Rec'vd verbal OK.
3/29/2017 - Contacted Brandon Powell/OCD re tagged top of Ojo plug @ 510', proposed not topping it off. Rec'vd verbal OK.

The subject well was P&A'd on 3/30/2017 per the notifications above and the attached report.

OIL CONS. DIV DIST. 3
MAY 18 2017

ACCEPTED FOR RECORD
MAY 15 2017
FARMINGTON FIELD OFFICE

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*: **Dollie L. Busse** Title: **Regulatory Technician**

Signature: Dollie L. Busse Date: 4/28/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by | Title | Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. | Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instruction on page 2)

NMOCD PV

4

Printed on 4/7/2017

PLUS WELL SERVICE SINCE 1992

P.O. Box 1979, Farmington, NM 87499
(505) 325-2627

Burlington Resources
P.O. Box 2200
Bartlesville, OK 74005

Name: Cornell SRC 4
API:30-045-08528

Well Plugging Report

Cement Summary

Plug #1 - (PC) with CIBP at 1855' spot 12 sxs (14.16 cf 15.7 PPG) Class B cement inside casing from 1855' to 1477' TOC. (Rev. TOC @ 1621') (BT #221=12sk)
Plug #2 - (Ft) mix and pump 50 sxs (59 cf 15.7 PPG) Class B cement; squeeze 32 sxs outside casing and leave 18 sxs inside casing from 1593' to 1026' TOC. (BT #221=50sk)
Plug #3 - (Kt) (Kt) mix and pump 91 sxs (107.38 cf 15.7 PPG) Class B cement, squeeze 84 sxs outside casing and leave 7 sxs inside casing from 770' to 600'. (BT #221=91sk)
Plug #3A - (Kt) Spot 12 sxs (14.16 cf 15.5 PPG) Class B cement inside casing from 723' to 433' TOC. (BT #221)
Plug #4 - (Ojo Alamo) spot 154 sxs (181.72 cf 15.8 PPG) Class B cement inside casing from 612' to 443' TOC. SI w/ 400# PSI and WOC overnight.
Plug #5 - (Surface) MSurface) spot 16 sxs (18.88 cf 15.7 PPG) Class B cement from 130' to 0' good cmt returns out casing valve. (BT #221=16sk)
P&A marker - mix and pump 40 sxs (47.2 cf) to top off casings and set P&A marker. (BT #221=40sk)

Work Detail

PUX	Activity
03/22/2017	
P	Rode rig and equipment to location.
P	Spot in rig and equipment on location. Note: small location.
P	RU day light pulling unit. Perform Start Well/LOTO. Spot in equipment.
P	Check well pressures: tubing and casing 22 psi, intermediate casing 0 PSI. Note: No valve on B.H. RU relief lines and blow down well.
P	ND companion flange. NU WSI companion flange and BOP. Change over to 2 1/6" tubing equipment. Pull tubing hanger.
P	SI well. Secure location. Debrief. SDFD.
P	Travel back to yard.
03/23/2017	
P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Check well pressures: casing and tubing 22 psi, intermediate casing 0 PSI. Note: No valve on B.H. RU relief lines and blow well down.
P	TOOH and tally 56 joints 2 1/6" IJ tubing, 1842'.
P	Round trip 3.5" GR to 1865'. PU 3.5" W.L. CIBP and RIH; set @ 1855'.
P	TIH open ended to CIBP at 1855'. Establish circulation and circulate well clean with total 34 bbls of water. Pressure test casing to 800 PSI for 30 minutes; PT good.
P	Plug #1 (PC) with CIBP at 1855' spot 12 sxs (14.16 cf 15.7 PPG) Class B cement inside casing from 1855' to 1477' TOC. (Rev. TOC @ 1621')

P	PUH to 1621'. Reverse circulate well clean. TOOH with tubing.
P	Perforate 4 bi-wire squeeze holes at 1593'. Establish injection rate 2.5 bpm @ 800 PSI. J. Morales got approval not to run CR. Bullhead Plug #2 and WOC overnight with tag in a.m.
P	Plug #2 (Ft) mix and pump 50 sxs (59 cf 15.7 PPG) Class B cement; squeeze 32 sxs outside casing and leave 18 sxs inside casing from 1593' to 1026' TOC.
P	SI well. Drain pump and lines. Debrief. SDFD.
P	Travel back to yard.
03/24/2017	
P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Open up well; no tubing or pressure. RU relief lines.
P	TIH and tag cement high at 645'. W.O.O. COP requested attempt to work down. Unable to get past 673'. W.O.O. COP requested to drill out to 780'.
P	Wait on drilling equipment.
P	Spot in drilling equipment. Tally A Plus 1 1/4" EUE tubing workstring. PU 2 3/4" 3 Blade bit, B.S., PU 22 joints and tag up at 776'. RU drilling equipment.
P	Drill from 776' to 783' and circulate well clean w/ 10 bbls of water. RD drilling equipment.
P	TOH with tubing and LD BHA.
P	Perforate 4 bi-wire squeeze holes at 770'. Establish injection rate of 1 bpm at 1500 PSI. W.O.O. COP requested run W.L. CR. PU 3.5" W.L. CR and RIH to 608'; unable to get deeper. Attempt to work past; unable to. POOH LD CR. PU 3.8" GR and attempt make past 608'; could not work past 608'. POOH and LD GR. RD W.L.
P	SI well. Secure loc. Debrief. SDFD.
P	Travel back to yard.
03/27/2017	
P	Travel to location.
P	HSM on JSA. Service start equipment.
P	Open up well; no pressures. Note: no B.H. valve. Layout relief lines. Perform BOP function test.
P	W.O.O. J. Morales received approval not to use a CR on Plug #3. Note: NMOCD requires 50% excess in annulus due to Ojo Alamo formation.
P	Plug #3 (Kt) mix and pump 91 sxs (107.38 cf 15.7 PPG) Class B cement, squeeze 84 sxs outside casing and leave 7 sxs inside casing from 770' to 600'.
P	W.O.C. Per sample. Cement sample still green; J. Morales, COP representative required W.O.C. over night.
P	Secure location. Debrief. SDFD.
P	Travel back to yard.
03/28/2017	
P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Open up well; no pressures. Note: B.H. does not have a valve. RU relief lines. Perform BOP function test.
P	TIH with tubing and tag TOC at 723'. Establish circulation w/ 2 bbls of water. Attempt to PT casing; bled down to 100 PSI in 1 minute.
P	Plug #3A (Kt) Spot 12 sxs (14.16 cf 15.5 PPG) Class B cement inside casing from 723' to 433' TOC.
P	PUH to 630'. Reverse circulate well to TOC @ 630'. TOH with tubing. SI well.
P	W.O.C. per cement sample.
P	TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of water.
P	Perforate 4 bi wire squeeze holes at 612'. SI well for 30 minutes. Check PSI: no

	PSI on Csg. or B.H. Establish injection rate 4 bpm at 750 PSI. J. Morales received approval not to run CR on Plug #4.
P	Plug #4 (Ojo Alamo) spot 154 sxs (181.72 cf 15.8 PPG) Class B cement inside casing from 612' to 443' TOC. SI w/ 400# PSI and WOC overnight.
P	SI Well. Debrief. SDFD.
P	Travel back to yard.
03/29/2017	
P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Open up well; no pressures. RU relief line to pit. Perform BOP function test.
P	TIH and tag TOC at 510'; good tag. TOH and LD tubing.
P	W.O.O. COP request run CBL from 500' to surface. Call for W.L.
P	HSM w/ W.L. Run CBL from 500' to surface. Engineers to determine TOC. W.O.O. NMOCD request perforate 1 hole @ 50' and attempt to establish injection rate not going over 100 PSI.
P	Perforate 1 bi-wire squeeze hole at 50'. Attempt to establish injection rate; pressured up to 100 PSI and bled down to 30 PSI in 5 minutes. J. Morals received approval to go 50' below perforations and circulate cement out casing valve and WOC.
P	PU 4 joint tubing and TIH to 130'. Establish circulation with .5 bbls of water.
P	Plug #5 (Surface) spot 16 sxs (18.88 cf 15.7 PPG) Class B cement from 130' to 0' good cmt returns out casing valve.
P	TOH and LD tubing. RD tubing and work floor. ND BOP. NU W.H.
P	SI well. Debrief. SDFD.
P	Travel to yard.
03/30/2017	
P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Open up well; no pressures. RU relief lines to pit.
P	Dig out W.H. Perform Hot Work Oermit. Cutoff W.H. and found down 2' in casing and down 6' in annulus. Mix and pump 40 sxs (47.2 cf) to top off casings and set P&A marker.
P	RD Daylight pulling unit. Secure location. MOL.

* P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

RECEIVED

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 28 2017

Farmington Field Office
Bureau of Land Management

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on page 2.

OIL CONS. DIV DIST. 3

APR 03 2017

1. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other	5. Lease Serial No. NM014375
	6. If Indian, Allottee or Tribe Name
	7. If Unit of CA/Agreement, Name and/or No.
	8. Well Name and No. Federal #1
2. Name of Operator: Riggs Oil and Gas Corp.	9. API Well No. 30-045-08804
3a. Address: 1590 N. Butler Ave, Farmington, NM 87401 — 3b. Phone No. *(include area code)*: 505-324-9881	10. Field and Pool or Exploratory Area: Fulcher Kutz PC/FtC
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*: 1670 FNL & 1690 FWL Sec 24 T29N R11W	11. Country or Parish, State: San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report bf	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☑ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Riggs Oil & Gas has plugged this well per the attached sheet

ACCEPTED FOR RECORD
MAR 29 2017
FARMINGTON FIELD OFFICE
BY: _____

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)*: Thomas J. Smith — Title: Agent

Signature: Thomas J. Smith — Date: 03/28/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. — Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

3

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Riggs Oil & Gas Corp.
Federal #1

1670' FNL and 1690' FWL, Section 4, T-29-N, R-12-W
San Juan County, NM
Lease Number: NM-014375
API #30-045-08804

Plug and Abandonment Report
Notified NMOCD and BLM on 2/6/17

Plug and Abandonment Summary:

Plug #1 Pictured Cliffs and Fruitland tops and perforations, below CR at 1180', with 152 sxs Class B cement (15.4 ppg, 179.36 cf) from 1788' to 1180'; no tag required, no cement above CR.

Plug #2 Ojo Alamo and Kirtland tops, with SQZ holes at 562' and CR at 512', mix and pump 164 sxs Class B cement (15.6 ppg, 193.52 cf), from 562' to 202', with 122 sxs in annulus, 6 sxs below CR and 36 sxs above CR.

Plug #3 Surface casing shoe, with SQZ holes at 152', inside outside, with 73 sxs Class B cement (15.5 ppg, 86.14 cf) from 152' to surface with 18 sxs in 5-1/2" casing and 55 sxs in annulus; install P&A marker with coordinates Long: 36° 45.466' N / Lat: 108° 6.404' W.

Plugging Work Details:

2/6/17 MIRU. Check well pressures: SITP (1") 90 PSI, SITP (1-1/4") 90 PSI, SICP 90 PSI, SIBHP 0 PSI. Blow down well. Work wellhead cap loose. Attempt to pull on 1" string unable to pull slips, work 1" slips cap free. Pulled 1" tubing found the tubing was hanging up, worked tubing free. Strip on and NU BOP. TOH and LD 75 jnts, 1" line tubing, last joint had parted pin on bottom. SIFN.

2/7/17 Check well pressures: SITP 85 PSI, SICP 85 PSI, SIBHP 0 PSI. Blow down well. RU 2-3/8" sub to tubing hanger. Pull 1-1/4" tubing to 8K attempt to release packer, leave 8K pulled on packer for 45 minutes. Attempt to work packer free, unable. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RU A-Plus wireline. Attempt to RIH with 1-1/4" GR, unable to pass to 1033'. POH. Pumped 10 bbl. water down 1-1/4" tubing while pulling 5K tension. Leave in tension. Attempt to RIH with 1" bar, unable to get passed 1365'. POH. Wait on orders. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RIH with 1-1/4" jet to 1180', cut tubing, ROH. Pull tubing hanger. TOH and LD 3 - 3' and 1 - 4' sub, 38 jnts, and 25' cut jnt of 1-1/4" tubing IJ. SIFN.

2/8/17 Check well pressures: no tubing, SICP 85 PSI, SIBHP 0 PSI. Blow well down. Tally A-Plus 2-3/8" tubing workstring. PU 5-1/2" WD CR and set at 1180'. Pressure test tubing to 1000 PSI, OK. Circulate casing clean with 40 bbl. water. Pressure test casing to 800 PSI, OK. **Spot plug #1** with calculated TOC at 1180'. RU A-Plus wireline. Run CBL from 1180' to surface, found TOC at 982'. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RU A-Plus wireline. Perforate squeeze holes at 562'. Pump down casing and establish circulation out bradenhead valve at a rate of 2.5 BPM at 500 PSI. PU 5-1/2" WD CR and set at 512'. **Spot plug #2** with calculated TOC at 202'. *Note:* During plug circulation out bradenhead slowly started dying down to a stream; when 130 sxs pumped away, Darrin Halliburton with BLM approved to stop plug and cover the Ojo Alamo and Kirtland. TOH. SI well. SIFN.

A-PLUS WELL SERVICE, INC.
P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Plugging Work Details (continued):

2/9/17 Check well pressures; no tubing, 0 SICP, bradenhead on vacuum. RU A-Plus wireline. RIH and perforate 4 HSC squeeze holes at 152'. Pump down casing with fresh water and establish circulation out bradenhead valve. ND BOP, NU WH. Re-establish circulation. **Spot plug #3** with TOC at surface. Dig out wellhead. *Note:* Darren Halliburton, BLM, request to WOC surface. RU A-Plus cut off. Cut off wellhead. Found cement down 2' in 5-1/2" casing and in 5-1/2" x 8-5/8" annulus. *Note:* Darren Halliburton, BLM, approved to weld on casing cap and P&A marker. Install P&A marker with coordinates 36° 45.466' N / 108° 6.404' W. RD and MOL.

Tom Smith, Riggs O&G representative, was on location.
Darren Halliburton, BLM representative, was on location.

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
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-103
Revised July 18, 2013

WELL API NO.
30-045-08851

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

7. Lease Name or Unit Agreement Name
Allen A

8. Well Number
1

2. Name of Operator
BP America Production Company- L48

9. OGRID Number
000778

3. Address of Operator
1515 Arapahoe St, Tower 1. Suite 700
Denver, CO 80202

10. Pool name or Wildcat
Basin Dakota

4. Well Location
Unit Letter D : 790 feet from the North line and 790 feet from the West line
Section 01 Township 29N Range 12W NMPM San Juan County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
5906'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☒
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:			☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

NMOCD
APR 26 2018
DISTRICT III

Please see the attached P&A operations performed March 2018.

Approved for plugging of wellbore only. Liability under bond is retained pending Receipt of C-103 (Subsequent Report of Well Plugging) which may be found @ OCD web page under forms www.emnrd.state.us/ocd

Spud Date: 03/12/1961

PNR only

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Toya Colvin TITLE Regulatory Analyst DATE 4/24/2018

Type or print name Toya Colvin E-mail address: Toya.Colvin@bp.com PHONE: 281-892-5369

For State Use Only

APPROVED BY: Brandon Powell TITLE Deputy Oil & Gas Inspector, District #3 DATE 5/3/18

Conditions of Approval (if any):

PV

Printed on 3/29/2018

BP AMERICA
PRODUCTION
COMPANY

Name: Allen A #1
API:30-045-08851, 03/29/2018

Well Plugging Report

Notification - Notify on 3/13/18 NMOCD @3:18 PM, BLM @3:20 PM

Work Detail

PUX	Activity
03/14/2018	
P	Rode rig and equip to location. Spot equipment.
P	RU pulling unit, unload BOP, spot in and RU pumping equip.
P	Secure location, SDFD.
03/15/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, 2 3/8" tbg-50 PSI, 4 1/2" csg-40 PSI, BH-0 PSI, break down WH, RU A-plus valves, relief lines, blow Well down to 0 PSI.
P	ND WH, NU BOP, RU work-floor, tbg equip.
P	Attempt to work and pull tbg hanger, pulling 40K turned to the right, dragging tbg, LD tbg hanger. Work tbg. TOOH slowly and tally 102 stds, 8 jnts, SN, 6' MA, (212 jnts total) 2 3/8" tbg, EUE, EOT @6600' DRAGGED HALF WAY OUT. RU A-plus W/L, attempt to RIH w/ gauge ring hit tight spot unable to get pass 4311' attempt to work through, POOH LD gauge ring, RD W/L.
X	PU 4 1/2" string mill TIH to 4311' stacked out.
X	Work string mill to 4342' w/ tbg tongs,
X	TOOH, LD stinger, SIW, secure location, SDFD.
03/16/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg, 4 1/2" csg-135 PSI, BH-0 PSI, RU relief lines blow Well down to 0 PSI.
X	PU 4 1/2" string mill, TIH to 4342'
X	PU and RU Power-swivel pump load and get circ w/ 90 BBLs
X	Drill and work string mill through from 4342' to 4460' felt free.
X	RD power-swivel.
P	TIH to 6500' attempt to TOOH started dragging
X	RU pump to tbg pump 120 BBLs.
P	TOOH LD string mill, (still dragged from 6500' to 4460')
P	SIW, drain up, secure location, SDFD.
03/19/2018	
P	S & S rig and equip, fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg, 4 1/2" csg-325 PSI, BH-0 PSI, RU relief lines attempt to blow Well down unable to RU pump to csg pump 40 BBLs kill Well
P	RU A-plus W/L. RIH w/ 4 1/2" gauge ring to 6480', RIH w/ 4 1/2" CIBP to 6468' set POOH, RD W/L.
P	TIH to 6468', w/ 2 3/8" tbg.
P	RU pump to tbg load and est circ w/ 50 BBLs pumped 105 BBLs, attempt to PT csg to 800 PSI, got a rate of 1 BPM @900 PSI, no test.
P	TOOH w/ tbg, RU pump to csg load w/ 10 BBLs.

X	RU W/L, Attempt to run CBL, unable to pass 4173', WOO, Run CBL from 4173' to surface.
P	SIW, drain up, secure location, SDFD.
03/20/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	PU plugging sub, TIH to 6468', RU pump to tbg load and est circ w/ 1 BBLs
P	Pumped **Plug #1 – (Dakota) Mix & pump 20sxs Class C cmt (26.4 cu/ft, 15.0#) from 6468' to 6330'.**
P	LD tbg. PUH to 4935'
P	WOC
P	TIH and tag Plug #1 @6330' tag good.
P	TOOH w/ tbg.
P	SIW, drain up, secure location, SDFD.
03/21/2018	
P	HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief - open to pit.
X	PU HSC gun RIH to 5774'. Perf 6 holes POOH, PU W/L. RIH w/ 4.5" CR set at 5756' POOH LD setting tool.
P	PU W/L stinger. TIH w/tbg. Tag CR. RU pump and est. circ. w/ 5 BBLS. SI csg pump and est. rate of 1 BBL a min. at 900 PSI, sting into CR pump and est. rate of 1.5 BBL a min. at 1400 PSI.
X	Pumped **Plug #2 - (Gallup) Mix & pump 57sxs Class C cmt (75.24 cf, 1.32 yield, 15.1 PPG) from 5776' to 5285' w/ 35sxs outside/ 2sxs below/ 20sxs above.**
X	TOOH, EOT at 4671" TOC. SIW Drain pump lines secure location. SDFD.
03/22/2018	
P	HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief -open to pit. TIH & Tag TOC at 5285' RU to tbg pump and est. circ. w/ 4 BBLS. SI csg pump and est. rate of 1 BBL a min at 1000 PSI. TOOH. LD stinger.
X	PU HSC gun. RIH perf 4 HSC holes at 4833', PU W/L. RIH w/ 4.5" CR set at 4804'.
P	PU W/L stinger. TIH w/ tbg. Tag CR. RU pump, est. circ. Attempt PT csg - no test leak off 300 PSI in 6 min. Sting into CR pump and est rate of 1 BBL a min at 800 PSI.
X	Pumped **Plug #3 – (Mancos) Mix & pump 57sxs Class C cmt (1.32 yield, 14.9 PPG) from 4833' to 4458' w/ 35sxs outside/2sxs below/ 20sxs above.**
P	POOH w/ tbg. WOC overnight. SIW drain pump and lines secure location SDFD.
03/23/2018	
P	HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief - open to pit. TIH & Tag TOC at 4458'. EOT at 3736' pump and est. circ. w/ 1 BBL SI csg. Attempt PT csg - NO TEST. Lost 200 PSI in 3 min. Pre mix 2% cal. chlor. for 20 sxs.
P	Pumped **Plug #4 - (MV) Mix & pump 20sxs Class C cmt w/ 2% CACL (1.32 yield, 15.0 PPG) from 3736' to 3402'.** WOC.
X	TIH & tag TOC at 3402' RU pump and est. circ. w/ 1 BBL PT csg to 1000 PSI PT good. TOOH w/ tbg.
P	PU Perf gun. RIH & perf 4 HSC holes @ 3150'. POOH, pump and est. rate of 1.5 BBLS a min at 600 PSI.
P	RIH w/ CR set @ 3100'. PT tbg to 1000 PSI good pump and est. circ. w/ 1 bbl sting into CR.
P	Pumped **Plug #5 - (Chacra) Mix & pump 52sxs Class G cmt (1.15 yield, 15.8 ppg) from 3150' to 2999' w/ 40sxs outside/ 4sxs below/ 8sxs above..**
P	TOOH w/ tbg.
X	PU HSC gun RIH & perf 4 HSC holes @ 2108'. POOH LD gun, Pump and est. rate of 2 BBLS a min at 400 PSI.

X	RIH w/ 4.5" CR set @ 2058'. Sting into CR.
P	Pumped **Plug #6 - (PC) Mix & pump 52sxs Class G cmt (1.15 yield, 15.9 ppg) from 2108' to 1937' W/ 40sxs outside/ 4sxs below/ 8sxs above..** POOH w/ tbg.
P	SIW drain pump and Equipment. SDFD.
03/26/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg-0 PSI, 4 1/2" csg-0 PSI, BH-0 PSI, open Well, WOO. NMOCD (John Durham) Requested Tag Plug #6.
P	TIH tag Plug #6 @1937' tag good, LD, TOOH.
P	RU A-plus W/L, RIH w/ 3 1/8" HSC to 1787' perf 3 holes, POOH, RU pump to csg attempt to get a rate pressured up to 1200#, bleed down to 800 PSI, (NMOCD request balanced plug WOC and tag) RD W/L.
P	PU plugging sub TIH to 1937', RU pump to tbg load and est circ. w/ 1 BBL.
P	Pumped **Plug #7 – (Fruitland Top) Mix & pump 24sxs Class G cmt w/ 2% CACL (27.6 cu/ft, 15.8#) from 1837' to 1534'.** TOOH w/ tbg. WOC.
P	TIH tag Plug #7 @1534' tag good. TOOH, load csg w/ 3.5 BBLs.
P	RU W/L, RIH w/ 3 1/8" HSC to 875' perf 3 holes, POOH, got a rate of 1.5 BPM @400 PSI, RD W/L.
P	RIH w/ CR set @ 825'. Release and sting out. Load and est circ w/ 1 BBL, sting in got a rate of 1 BPM @500 PSI.
P	Pumped **Plug #8 – (Kirtland/Ojo Alamo) Mix & pump 159sxs Class G cmt (182.85 cu/ft, 15.6#) from 875' to 498' w/ 129sxs outside/ 4sxs below/ 26sxs above..** TOOH w/ tbg.
P	RU W/L, RIH w/ 3 1/8" HSC to 314' perf 3 holes, POOH got a rate of 1.5 BPM @200 PSI, RD W/L.
P	RIH w/ CR set @ 264'. Release and sting out load and est circ w/ 1 BBL, sting in got a rate of 1 BPM @400 PSI.
P	Pumped **Plug #9 – (Csg Shoe) Mix & pump 54sxs Class G cmt (65.1 cu/ft, 15.6#) from 314' to 68' w/ 42sxs outside/ 4sxs below/ 8sxs above.**
P	TOH LD setting tool, SIW, secure location, SDFD.
03/27/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg-0 PSI, 4 1/2" csg-0 PSI, BH-0 PSI, open Well,
P	Tag TOC at 68', RIH w/ 3 1/8" HSC & Perf 3 holes at 60'. Approved by NMOCD (Monica Kuehling) on location. Est. circ. out BH & circ. clean.
P	RD floor. ND BOP. NU WH.
P	Re-est. circ. Pumped **Plug # 10 – (Surface) Mix & pump 34sxs Class G cmt (38.64 cf, 6.88 bbls, slurry 1.15 yield, 15-8#) from 60'- surface.** Circ. good cement out BH & SIW (NMOCD requiring 3 hrs. WOC)
P	RD PT & load BOP, RD rig.
P	Finish digging out WH, JSEA. Cut off WH w/air saw, Tag TOC in 4.5 csg @ 4',weld on cap & DHM (found TOC in 4.5 & annulus down 6",OK'd by NMOCD rep.), clean up location. RD. MOL **COORDINATES** - LONG. -108.056240 LAT.+36.760000

* P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

On Site Reps:

Name	Association	Notes
John Durham	NMOCD	on location
Monica Kuehling	NMOCD	on location

Allen A #1

As Plugged

Basin Dakota

P&A'd: 3/27/2018

Spud: 3/13/61
Completion: 5/22/61

790' FNL, 790' FWL, Section 1, T-29-N, R-12-W, San Juan County, NM

API #30-045-08851

Elevation: 5905' GL

12.25" hole

8.625", 24#, Casing set @ 264'
Cement with 200 sxs, circulate to surface

Ojo Alamo @ 625'

Kirtland @ 825'

Fruitland @ 1475'

Csg leak @ 1720'; squeezed with 75sx (1993)

Pictured Cliffs @ 2058'

Csg leak @ 2060'; squeezed with 75sx (1993)

Chacra @ 3376'

Csg leak @ 4055'; squeezed with 150sx (1993)

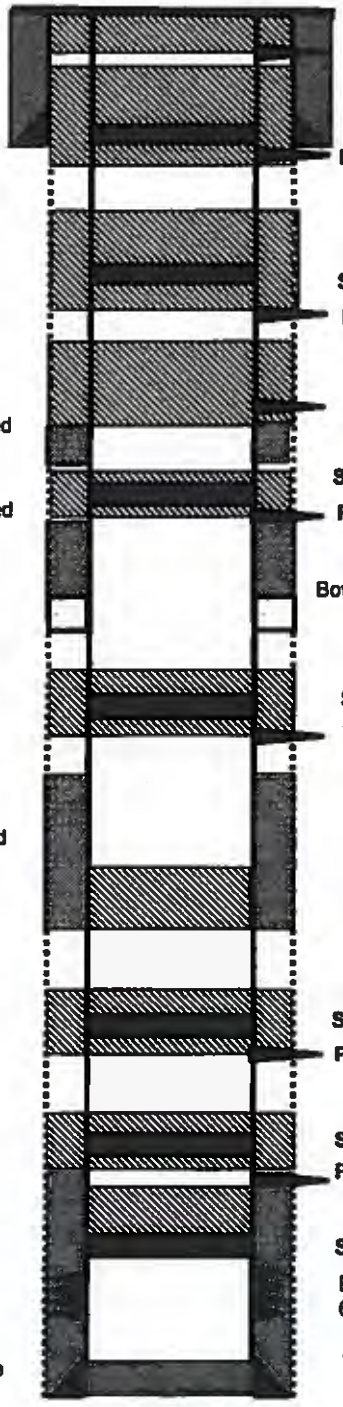
Mesaverde @ 4110'

Mancos @ 4735'

Gallup @ 5726'

Dakota @ 6516'

7-7/8" Hole



Perforate @ 60'

Set CR @ 264'

Perforate @ 314'

Set CR @ 825'

Perforate @ 875'

Perforate @ 1787'

Set CR @ 2058'

Perforate @ 2108'

Bowen Casing Patch @ 2320'
Cemented with 100 sxs

Set CR @ 3100'

Perforate @ 3150'

Set CR @ 4804'

Perforate @ 4833'

Set CR @ 5756'

Perforate @ 5774'

Set CR @ 6468'

Dakota Perforations:
6518' – 6718'

4.5" 9.5#, casing set @ 6780'
Stage 1: Cemented 250 sxs

TD 6786'
PBTD 6750'

Plug #10: 60' – 0'
34sxs Class G cmt

Plug #9: 314' – 68'
54sxs Class G cmt (42sxs outside/4sxs below/8sxs above) TOC @ 68'

Plug #8: 875' - 498'
159sxs Class G cmt (129sxs outside/4sxs below/26sx above)

Plug #7: 1837' – 1534'
24sxs Class G cmt w/ 2% CACL. TOC @ 1534'

Plug #6: 2108' – 1937'
52sxs Class G cmt (40sxs outside/4sxs below/8sxs above) TOC @ 1937'

Plug #5: 3150' – 2999'
52sxs Class G cmt (40sxs outside / 4sxs below/8sxs above)

Plug #4: 3736' – 3402'
20sxs Class C cmt w/ 2% CACL. TOC @ 3402'

Plug #3: 4833' – 4458'
57sxs Class C cmt (35sxs outside/2sxs below/20sxs above). TOC @ 4458'

Plug #2: 5776' – 5285'
57sxs Class C cmt (35sxs outside/2sxs inside/20sxs above). TOC @ 5285'

Plug #1: 6468' – 6330'
20sxs Class C cmt
TOC @ 6330'

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS JUL 23 2018

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

Bureau of Land Management

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No: SF-065557-A
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA/Agreement, Name and/or N:
8. Well Name and No.: Cornell #3R
9. API Well No: 30-045-29539
10. Field and Pool, or Exploratory Area: Fulcher Kutz, Pictured Cliffs
11. County or Parish, State: San Juan County, NM

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other
2. Name of Operator: Epic Energy, LLC
3a. Address: 7415 East Main, Farmington, NM 87402
3b. Phone No. *(include area code)*: 505-327-4892
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*: 1450' FSL & 1190' FEL, Section 1, T29N, R12W

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☒ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days Following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Epic Energy, LLC, permanently plugged and abandoned the Cornell #3R on July 13, 2018 as follows:

Removed rods/pump and tubing from wellbore. Established injection rate w/ 20 bbls of water. Pumped a total of 240 sx (283 cf) of Class B cement. After pumping the 1st bbl of cement, dropped 36 ea. 1.3 SG ball sealers with the following 5 bbls of cement. Filled casing from perforations to surface. Pressured up to max of 500 psi. Bled off pressure and cut off well head. Topped off casing and annulus (4.5" x 7") with ~ 2 sx (2.36 cf) Class B cement. Welded on P&A marker and placed additonal 3 sx (3.54 cf) of Class B around 7" casing and P&A marker. Removed all surface equipment. Location ready for reclamation.

Note: P&A job witnessed by Mr. Casey w/ BLM

ACCEPTED FOR RECORD
AUG 06 2018
FARMINGTON FIELD OFFICE
By:

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*: John C. Thompson
Title: VP of Engineering & Operations
Signature: John C. Thompson
Date: May 29, 2018

THIS SPACE FOR FEDERAL OR STATE USE

Approved by | Title | Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD

Appendix F

Appendix G

Appendix H

Appendix I