

**FINAL REMOVAL COMPLETION REPORT
FOR
EVENING STAR AND COMPROMISE MINE RV
NEIHART, CASCADE COUNTY, MONTANA**

Prepared for
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8
1595 Wynkoop Street
Denver, Colorado 80202

Prepared by
WESTON SOLUTIONS, INC.
Region 8 Superfund Technical Assessment and Response Team

February 3, 2020

Approved by: _____
Duc Nguyen
United States Environmental Protection Agency
Region VIII On-Scene Coordinator

Date: _____

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Weston START Project Manager	Michael Worden
EPA On-Scene Coordinator	Duc Nguyen

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Prepared by: 
Michael Worden, START Project Leader

Date: 2/3/2020

Approved by: 
Mark Blanchard, START Program Manger

Date: 2/3/2020

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List of Acronyms

%	percent
µg/m ³	micrograms per cubic meter
bgs	below ground surface
CO	Colorado
CSCMD	Carpenter-Snow Creek Mining District
ERRS	Emergency Response and Rapid Services
ft	feet
in.	inches
NAAQS	National Ambient Air Quality Standards
mm	millimeter
MT	Montana
NPL	National Priority List
OSC	On-Scene Coordinator
OU1	Operable Unit 1
PCB	polychlorinated biphenyls
PM	particulate matter
PM _{2.5}	particulate matter 2.5 micrometers and smaller
PM ₁₀	particulate matter 10 micrometers and smaller
ppm	parts per million
SDS	Safety Data Sheet
START	Superfund Technical Assessment and Response Team
SVOCs	semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
TT	TetraTech, Inc.
TWA	time-weighted average
U. S. EPA	United States Environmental Protection Agency
WESTON	Weston Solutions, Inc.
XRF	X-ray fluorescent
yd ³	cubic yards

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Executive Summary

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc., (WESTON®) Superfund Technical Assessment and Response Team (START) under Technical Direction Document (TDD) No. 0001/1902-07 to support U.S. EPA's removal action at the Evening Star and Compromise Mine RV sites (Figure 1) located in Neihart, Cascade County, Montana (MT). On October 1, 2019 the U.S. EPA, START, and Emergency and Rapid Response Services (ERRS) contractors mobilized to the Evening Star and Compromise Mine RV sites to perform removal operations.

Evening Star Mine

The Evening Star Mine is located along Highway 89 in the town of Neihart, MT, and consists of mine process buildings, mill tailings and waste rock areas, an existing repository, and a discharging mine adit (Figure 2). The adit discharge water originally flowed downhill to a culvert under Highway 89 and into Belt Creek. The culvert under Highway 89 was filled with silt, causing water to flow over Highway 89 at times. Removal activities at the Evening Star Mine site included systematically demolishing two dilapidated historical mine processing buildings, excavating contaminated soils from the demolished building footprints and hill slope, and excavating a catchment basin and drainage channel for routing of the mine adit discharge water to Spring Gulch adjacent to the Site. Approximately 3,000 cubic yards (yd³) of excavated soils from the demolished building footprint and hill slope were hauled into the existing repository on-site and treated with EnviroBlend CS. A total of 51,220 pounds of metal were transported off-site for recycling.

Compromise Mine

The Compromise Mine site is located approximately 1,000 feet (ft) east of N. Main St. in Neihart, MT (Figure 2). The site consists of a discharging shaft from which water flows downhill, past residences, and continues under Highway 89 (separately from the Evening Star discharge) to enter Belt Creek. Removal activities at the Compromise Mine site included rerouting the shaft discharge water into a wetland area to alleviate overland flow of water past residences, routing upgradient surface water run-off away from the Compromise Mine shaft, and installing a security fence around the mine shaft.

All site operations at the Evening Star and Compromise Mine RV sites were completed, and personnel and equipment demobilized from Neihart, MT on October 25, 2019.

1.0 SITE DESCRIPTION AND BACKGROUND

The Evening Star Mine site (46.9442257° North and 110.7473164° West) is located within Operable Unit 1 (OU1) of the Carpenter-Snow Creek Mining District (CSCMD) National Priorities List (NPL) site near the town of Neihart, Montana (MT) (see the site location in Figures 1 and 2). The Evening Star Mine is located along Highway 89 in the town of Neihart, MT and consists of mine process buildings, mill tailings and waste rock areas, an existing repository, and a discharging adit. The adit discharge water originally flowed downhill to a culvert under Highway 89 and into Belt Creek. The culvert under Highway 89 was filled with silt, causing water to flow over Highway 89 at times. Previous soil investigations have indicated the presence of metals-contaminated waste rock immediately adjacent to the existing structures at the Evening Star Mine (TT, 2018). Previous soil investigations have also indicated the presence of metals-contaminated soils within the mine process buildings at the Evening Star Mine (Weston, 2019). Results from previous soil investigations conducted by START at the Evening Star Mine site can be found in Attachment A.

The Compromise Mine site (46.9360263° North and 110.7360345° West) is located within OU1 of the CSCMD NPL site near the town of Neihart, MT (see the site location and site vicinity maps in Figure 1 and Figure 2). The Compromise Mine is located approximately 1,000 feet (ft) east of N. Main St. in Neihart, MT. The Site consists of a discharging shaft from which water flows downhill past residences, and continues under Highway 89 (separately from the Evening Star discharge) to intersect with Belt Creek as well. There are no buildings associated with the Compromise Mine site. Previous soil investigations have indicated the presence of metals-contaminated soils at the Compromise Mine (Weston, 2019). Results from previous soil investigations conducted by START at the Compromise Mine site can be found in Attachment A.

2.0 SOIL TREATMENT BENCH-TOP STUDY

On July 16, 2019, U.S. EPA On-Scene Coordinators (OSCs), Duc Nguyen and Craig Gigglesman, START, and Emergency and Rapid Response Services (ERRS) contractors mobilized to the Evening Star and Compromise Mine RV site to perform site walks and opportunistic sampling. EPA OSCs instructed START to collect a sample from within the corrugated metal building where previous soil sample data indicated the highest concentrations of metals-contaminated soils at the Evening Star Mine site (Weston 2019). Additionally, lime stored in supersacks and not suitable for use at another mine site were also collected for potential use as the soil treatment media for the Evening Star Mine contaminated soils. Some of the lime supersacks had become compromised as they were left exposed to the weather. A composite lime sample was collected from multiple supersacks for START to return to Denver, Colorado (CO) for Treatability Study processing.

On July 23, 2019, START processed Treatability Study samples by weighing out contaminated soils and lime, homogenizing the mixture of contaminated soils with lime concentrations of 2 percent (%), 4%, 6%, 8%, and 10% (Table 1), and placing them into sample jars for laboratory analysis. Results of the Treatability Study samples indicated that the lime was not sufficient for treating the contaminated soils as there was no observable change with respect to the leaching of lead from the treated soils (Table 2). The laboratory analytical report for the Treatability Study samples can be found in Attachment B.

On August 21, 2019, START mobilized to the Evening Star site for collection of additional soils for a second Treatability Study analysis to be performed by EnviroBlend, Inc. START collected a sample of contaminated soils from the same location within the corrugated metal building (ES-10-SO-08212019) and from the slag area (ES-11-SO-08212019 see Figure 3) which had the highest concentrations of lead leaching from the soils (Weston, 2019). EnviroBlend, Inc. conducted multiple iterations of treating and analyzing the soils, but were unsuccessful in sufficiently treating the soils from within the corrugated metal building (Attachment B). The EnviroBlend CS product was successful in treating the slag material. Due to the large disparity of metals concentrations in the soils across the Evening Star Mine site, and the effectiveness of EnviroBlend CS treating some of the soils, the EnviroBlend CS product was selected by the EPA OSC for the soil treatment product to be utilized at the site at a desired concentration of 3%. The Safety Data Sheet (SDS) for the EnviroBlend CS can be found in Attachment C.

3.0 REMOVAL ACTIVITIES

On October 1, 2019, U.S. EPA OSC Duc Nguyen mobilized START and ERRS contractors to the Evening Star and Compromise Mine RV sites to perform removal operations. Photographic documentation of site activities can be found in Attachment D.

3.1 Evening Star Mine Removal Activities

The Evening Star Mine removal activities included the demolition of two mine process buildings, the treatment and consolidation of contaminated soils to the existing on-site repository, the installation of a catchment basin for the mine adit discharge water, channelizing of the mine adit discharge water to Spring Gulch, site stabilization, and site restoration (Figure 4).

3.1.1 Evening Star Historical Building Demolition Activities

The demolition of two historical mine process buildings at the Evening Star Mine site began on October 2, 2019. A corrugated metal building and wooden building had fallen into disrepair from lack of upkeep and maintenance, and contained contaminated soils within and adjacent to the buildings. Both buildings were systematically demolished to minimize the dust generated and to allow the water trailer to sufficiently provide dust suppression water. All scrap metals from the building demolition were segregated, screened for contamination, decontaminated if necessary, and placed into a roll-off bin for recycling. Decontamination of metal for recycling consisted of removing contaminated soils stuck on the materials. Contaminated soils were rinsed off with water, the water was contained within the repository area, and was allowed to evaporate prior to backfilling. A total of 51,220 pounds of metal was sent off-site for recycling, as reported by ERRS.

Wood from the two structures was sampled (sample ES-01-WD-10032019) and analyzed for metals, semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs). The EPA OSC consulted with the US Forest Service to ensure burning of the wood from structures was appropriate and would not risk an uncontrolled wildfire. Results from the wood sample (Table 3) were reviewed by the EPA OSC and the burning of the wood was approved by the EPA OSC. During the burning operations and handling of contaminated soils, particulate matter (PM) air monitoring was performed at two locations along the site boundaries (Figure 3) under the direction of the EPA OSC. Burning of wood debris from buildings was conducted from October 9, 2019

through October 13, 2019. At the end of each day, the fire was extinguished and covered with soils to ensure it would not flare up while personnel were not on-site.

PM air monitoring results were below the National Ambient Air Quality Standards (NAAQS) for particles with diameters 2.5 micrometers and smaller (PM_{2.5}) and particles with diameters 10 micrometers and smaller (PM₁₀). The NAAQS¹ 24-hour time-weighted average (TWA) for PM_{2.5} is not to exceed 35 micrograms per cubic meter (µg/m³), and not to exceed 150 µg/m³ for PM₁₀ over a 24-hour TWA. The PM air monitoring daily TWA results for the two air monitoring stations are provided in Table 4.

Results from all samples collected during the October 2019 removal operations are provided in Attachment E.

3.1.2 Evening Star Mine Adit Discharge Activities

The re-routing of the Evening Star Mine adit discharge involved excavation of a catchment basin adjacent to the mine adit portal, excavation of an open channel from the catchment basin along the existing pathway to the southeast to an existing culvert, lining the catchment basin and channel, installing limestone in the catchment basin, and installing native rock through the open channel. The catchment basin was excavated approximately 15 ft wide, 30 ft long and approximately 2 ft below ground surface (bgs) directly adjacent to the mine adit portal and between two mine buildings which were not removed during EPA's 2019 activities (Figure 4). A berm was installed around the catchment basin approximately 3 ft high and larger boulders were placed on the outside of the catchment basin for reinforcement in the event the adit discharge flowrate were to unexpectedly increase in the future. The catchment basin was lined with a 15 millimeter (15 mm) vapor barrier liner, and then limestone was installed to provide pH balance for the mine adit discharge before flowing to the open channel.

The open channel was excavated approximately 2 to 3 ft bgs and approximately 5 ft wide, downhill to the southeast along the Evening Star access road. The open channel was sufficiently excavated to allow the adit discharge water to continuously flow. The open channel was then lined with the same vapor barrier liner as utilized for the catchment basin, and secured with native rock harvested from various locations on-site. The liner was covered with rock because if left exposed to sunlight and direct contact with wildlife, the liner degradation could be greatly increased and become compromised over time. The open channel was connected to an existing culvert at the switchback in the access road southeast of the adit. From the existing culvert outlet the adit discharge flows approximately 10 ft through thick vegetation where it flows into Spring Gulch adjacent to Highway 89 (Figure 4). The new adit discharge pathway is intended to alleviate the loading of the culvert under Highway 89 near the entrance to the Evening Star Mine site.

3.1.3 Evening Star Excavation and Repository Activities

Overtime since the Evening Star Mine had ceased operations, erosion or other causes have resulted in contaminated soils in the repository to become exposed, resulting in periodic water ponding on the repository. The existing repository cap was not removed for potential top soil or cap material

¹ NAAQS Table <https://www.epa.gov/criteria-air-pollutants/naaqs-table> (last accessed December 13, 2019).

use for the removal activities. This was due to the varying and unknown thickness across the repository. Excavated soils from the area of the demolished buildings and from the hill slope were simply added to the existing repository. An estimated 3,000 cubic yards (3,000 yd³) of contaminated soils were excavated from the building demolition footprint and the hill slope. Excavation of contaminated soils was completed on October 11, 2019. Post-excavation composite samples were collected from various excavation areas. Sample location areas and sample results can be seen in Figure 5 and Table 5, respectively.

Excavated soils which were hauled to the repository were mixed/treated with EnviroBlend CS by spreading supersacks of EnviroBlend CS around the repository area and mixing them with the soils via an excavator and bulldozer. A total of 43 yd³ of EnviroBlend CS were mixed with an estimated 3,000 yd³ of excavated contaminated soils. Mixing of Enviroblend CS with contaminated soils in the repository was completed on October 21, 2019. Sample results from the contaminated soils in the repository prior to treatment and post treatment with EnviroBlend CS indicate that the EnviroBlend CS showed a decrease in the leaching of lead from the soils (Table 6). Once the contaminated soils and EnviroBlend CS were thoroughly mixed and sampled, the repository was then graded to ensure there would not be water ponding on the repository, and backfill and restoration activities commenced.

3.1.4 Evening Star Mine Site Restoration

Backfill operations began after the excavation of contaminated soils from the excavation area and treatment of contaminated soils within the repository. Backfill material was harvested from existing on-site areas, field screened with an X-ray fluorescent (XRF) unit and sampled (Sample ES-17-SO-10172019; Table 7) for confirmation. Backfill material was field screened with the XRF unit to ensure Lead levels were below 3,000 parts per million (ppm) and suitable for the first 18 inches (in.) of backfill/cap as per the EPA OSC. A composite soil sample was collected from backfill stockpiles (Sample EM-17-SO-10182019, Table 7). Approximately 1,500 yd³ of backfill was harvested on-site for the first 18 in. of backfill. Imported top soil was utilized for the final 6 in. of backfill. Two composite samples of imported top soil were collected (Samples EM-16-SO-10162019 and EM-18-SO-10192019, Table 7) for the two separate days top soil was received at the site. A total of 908.05 tons of top soil was imported to the site. All excavated areas and the repository had 18 in. of backfill material placed and then 6 in. of top soil. Soils on the hill slope were placed via the excavator and compacted by using the excavator bucket. The repository area backfill compaction was performed by the bulldozer while spreading and grading of the repository.

After the hill slope had been backfilled, erosion matting was placed on the hill slope and anchored with landscaping stakes. Lastly, enough seed mix (Attachment F) to cover approximately 6 acres was spread across the entire site where soils had been disturbed, including the hill slopes, excavation area, repository, and along the drainage channel. Site restoration activities were completed on October 25, 2019, and all personnel and equipment demobilized from the site.

After the removal action and site restoration, a site topographic survey was conducted by TetraTech Inc. The Topographic Map of the Evening Star Mine site is provided in Attachment G.

3.2 Compromise Mine Removal Activities

The Compromise Mine removal activities included installing a catchment basin and channelizing of shaft discharge water to the wetland area, channelizing clean surface water away from the mine shaft, and installing a security fence around the mine shaft.

3.2.1 Compromise Mine Shaft Discharge Activities

Prior to the removal activities, the shaft discharge water flowed down a pathway causing mine impacted water to flow overland past residences downhill from the Compromise Mine site. On October 12, 2019, excavation of the catchment basin and drainage channel began at the Compromise Mine site. The catchment basin was excavated approximately 3 ft bgs, 5 ft wide and 15 ft long directly adjacent to the Compromise Mine shaft in the direction of the existing drainage. The drainage channel was excavated approximately 3 ft bgs and 5 ft wide from the catchment basin to the wetland area approximately 50 ft north of the Compromise Mine shaft. The catchment basin and drainage channel were lined using the same 15 mm vapor barrier liner as employed at the Evening Star site. Limestone was installed in the catchment basin to provide pH balance of the mine shaft discharge, and native rock was installed in the drainage channel. A portion of the drainage channel had a buried culvert installed (Figure 6) in order to accommodate vehicle use by residents and to avoid damage to the drainage channel by vehicle use. Excavation of the catchment basin, drainage channel, and up-gradient surface water runoff diversion was completed on October 17, 2019.

The up-gradient surface water runoff was diverted by installing a culvert and soil berm to route water toward the wetland area and away from the Compromise Mine shaft. Soils excavated from the catchment basin and drainage channel were in-situ field screened using the XRF unit. The EPA OSC instructed START that XRF lead levels of 3,000 ppm and greater were to be considered contaminated for the purposes of the Evening Star and Compromise Mine RV project. XRF readings of excavated soils at the Compromise Mine site were less than 2,000 ppm of lead, and suitable for use to berm the up-gradient surface water runoff away from the Compromise Mine shaft. The soil berm was installed to fill in the natural depression which was routing surface water run-off toward the Compromise Mine shaft. It is anticipated that the Compromise Mine shaft discharge will potentially decrease with less water infiltrating the mine.

3.2.2 Compromise Mine Site Restoration

A new fence was installed around the Compromise Mine shaft while not disturbing the dilapidated headframe. The fence was installed around three sides of the Compromise Mine shaft, going over the drainage channel, while the steep hill slope side, to the south, was left undisturbed. All areas of disturbed soil from excavation activities or movement of heavy equipment were reseeded with the same seed mix as utilized at the Evening Star Mine site (Attachment F). Site restoration activities were completed on October 25, 2019, and all personnel and equipment demobilized from the site. After the removal action and site restoration, a site topographic survey was conducted by TetraTech, Inc. The Topographic Map of the Compromise Mine site is provided in Attachment G.

4.0 CONCLUSIONS

As a result of the removal activities at the Evening Star mine site, two dilapidated historical mine process buildings were demolished. A total of 3,000 cubic yards of contaminated soils were excavated, hauled, treated, and placed into the existing on-site repository. The mine adit discharge water was rerouted away from the Highway 89 culvert to Spring Gulch and should alleviate the load on the culvert which had become filled with silt at the entrance of the Evening Star Mine site under Highway 89. All disturbed contaminated soils were backfilled with native soils and imported top soil, and seeded to promote vegetation growth. A total of 51,220 pounds of metal was transported off-site from the Evening Star mine site for recycling.

As a result of the removal action activities at the Compromise Mine site, the upgradient surface water runoff was routed away from the mine shaft, and the shaft discharge water was rerouted to the wetland area. Overland water flowing past residences downhill from the Compromise Mine site should be lessened with the new discharge route. Also, it is anticipated that the flowrate from the Compromise mine shaft will potentially decrease with less surface water runoff potentially infiltrating the mine shaft.

All activities at the Evening Star and Compromise Mine sites were completed, and all equipment and personnel were demobilized from the site on October 25, 2019.

References

TetraTech, Inc. (TT), 2018. *DRAFT Evening Star Tailings and Waste Rock Sampling Technical Memorandum*. Helena, Montana.

Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
TT, 2018	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

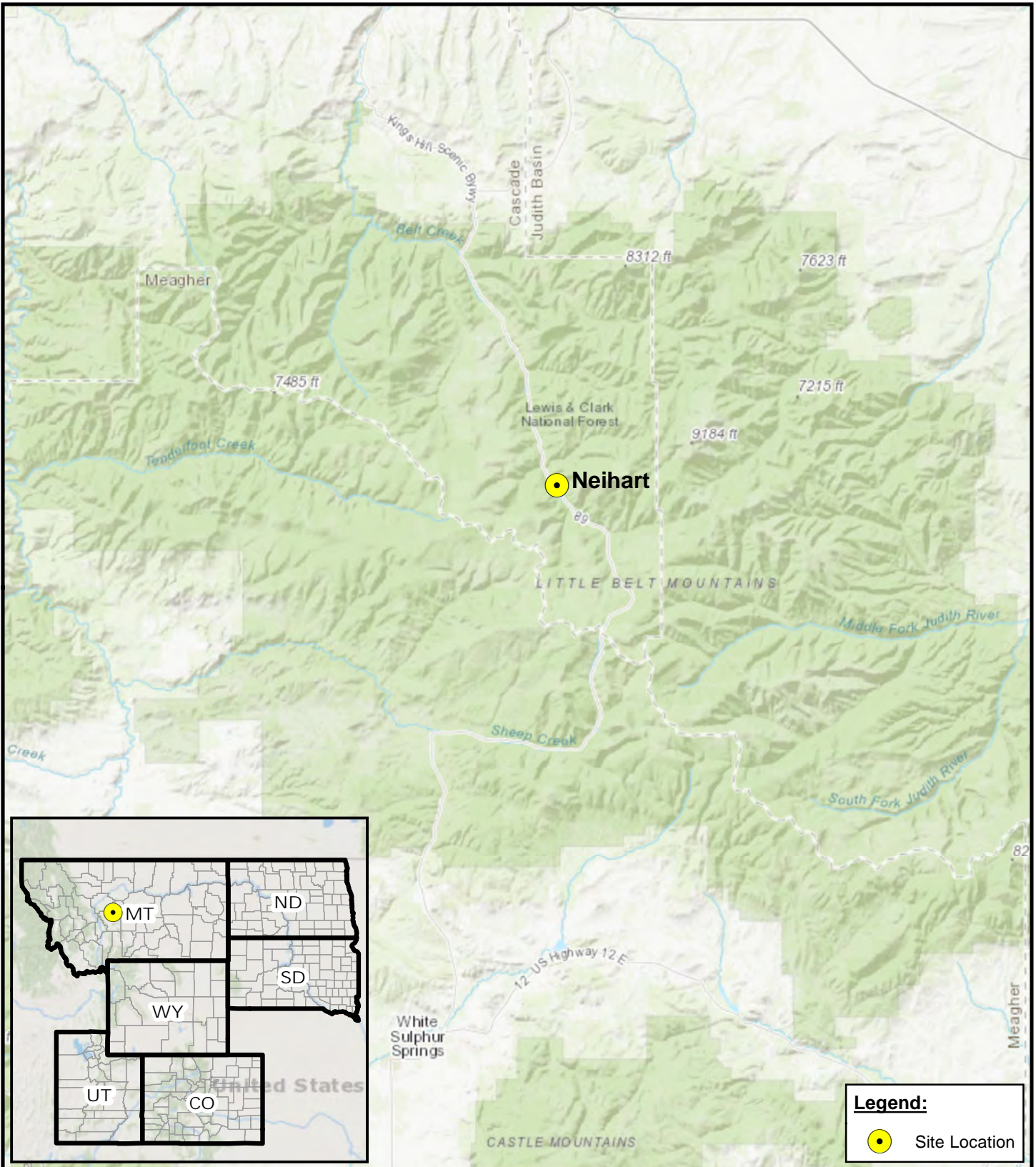
EPA, 2019. *Technical Direction Document (TDD) 0001/1902-07*.

Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
EPA, 2019	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

Weston Solutions, Inc. (Weston), September 9, 2019. *Evening Star and Compromise Mine RS, Evening Star and Compromise Mine RV – Final Letter Report*. Lakewood, Colorado.

Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
EPA, 2019	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

Figures

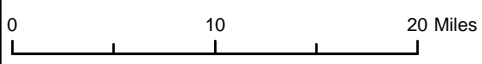


Legend:

 Site Location

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Background: ESRI World Topo Map (2019)



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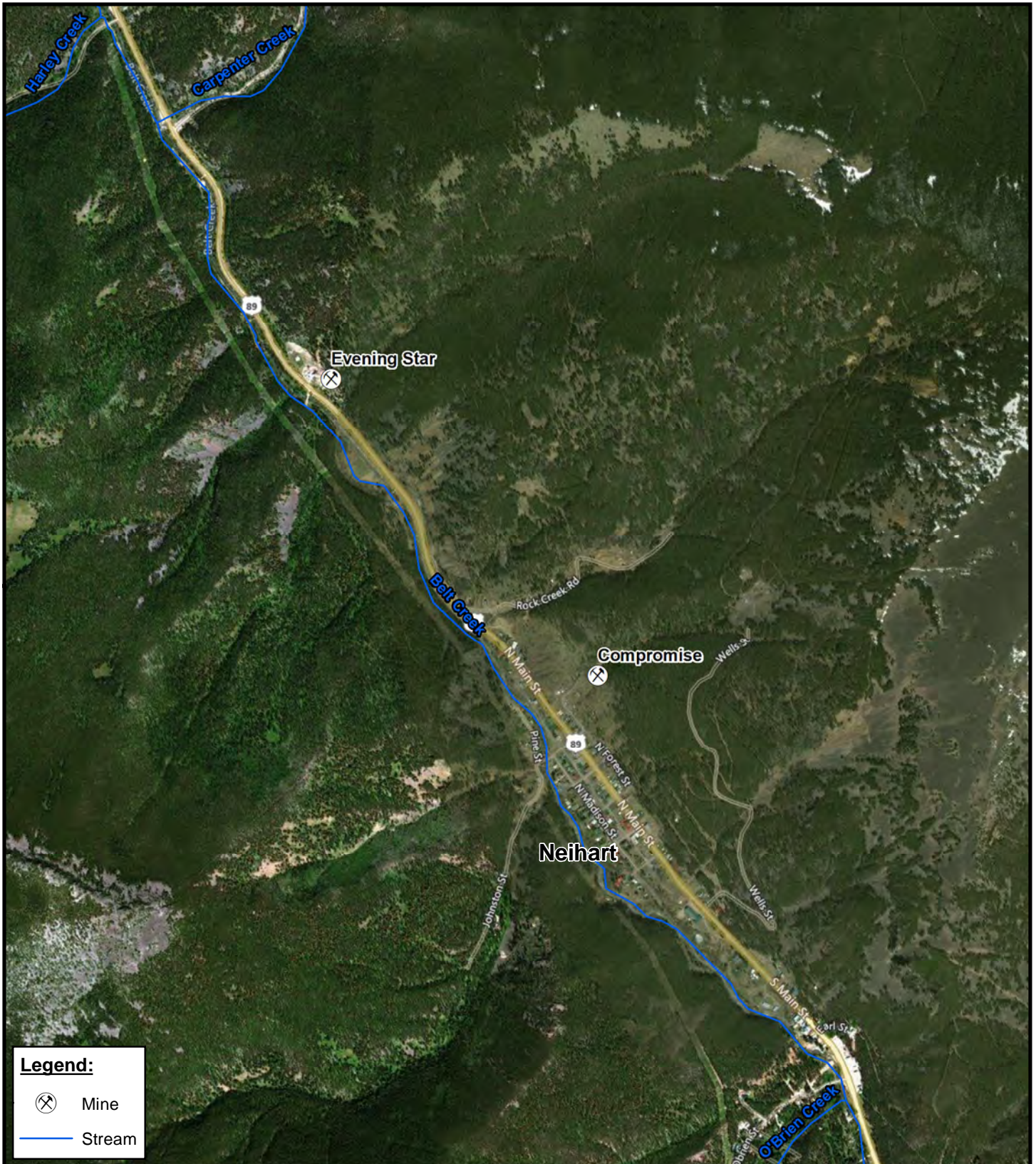
Contract: EP-S8-13-01
 TO/TDD: 0001/1902-07

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FIGURE 1
SITE LOCATION MAP
EVENING STAR AND COMPROMISE MINES
NEIHART, CASCADE COUNTY,
MONTANA

Date: 12/19/2019

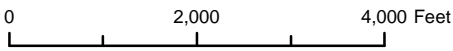


Legend:

-  Mine
-  Stream

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Mines: Georeferenced Montana DEQ (2018)
 Background: Bing Hybrid (2013)



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FIGURE 2
SITE VICINITY MAP
EVENING STAR AND COMPROMISE MINES
NEIHART, CASCADE COUNTY,
MONTANA

Date: 12/23/2019

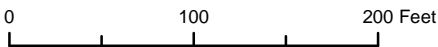


Legend:

-  Sample Location
-  Mine

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Mine: Georeferenced Montana DEQ (2018)
 Background: ESRI World Imagery (2019)



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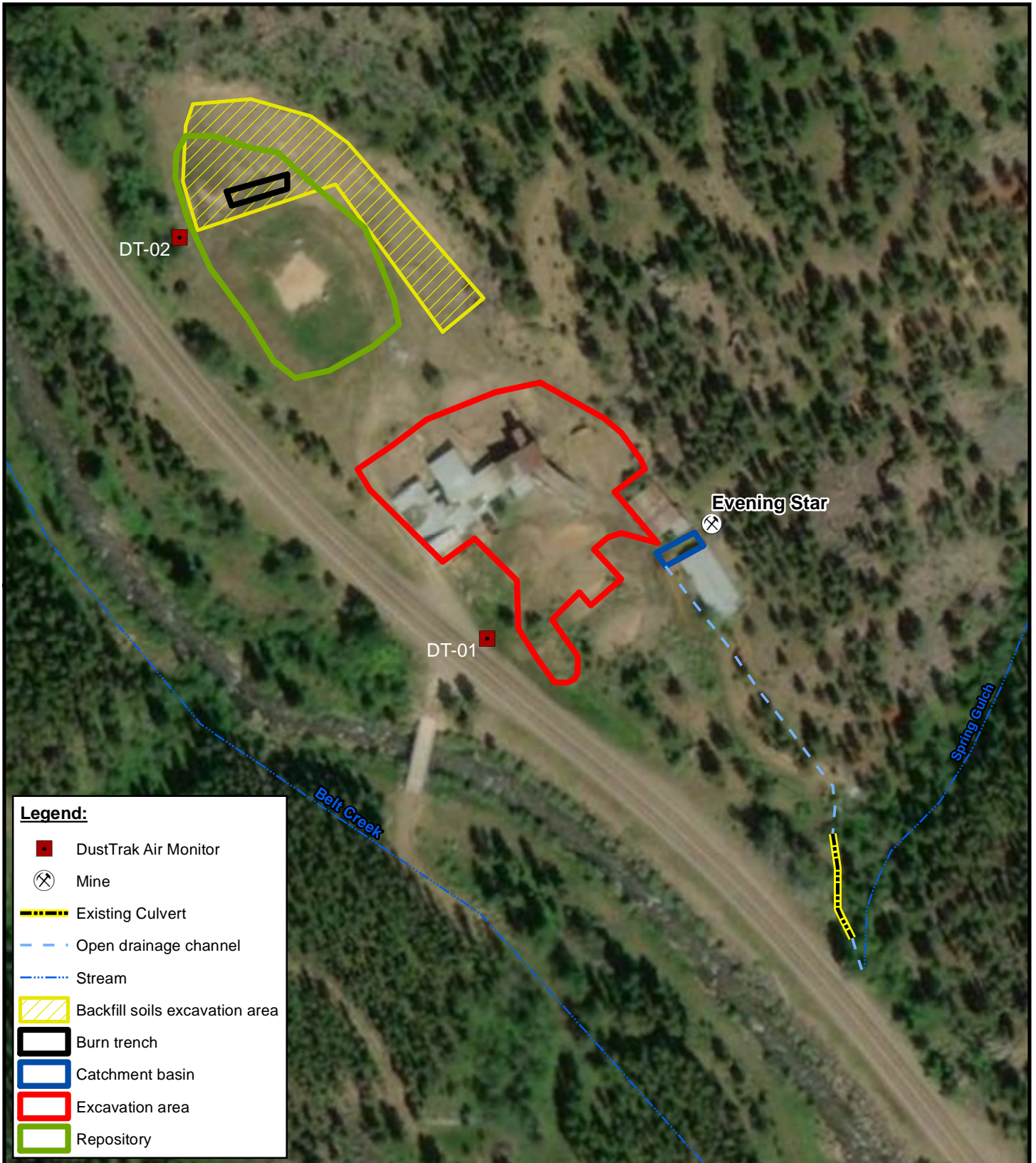
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FIGURE 3
TREATABILITY STUDY SAMPLE LOCATIONS
EVENING STAR MINE
NEIHART, CASCADE COUNTY,
MONTANA

Date: 12/23/2019

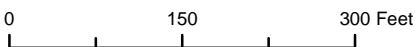


Legend:

- DustTrak Air Monitor
-  Mine
-  Existing Culvert
-  Open drainage channel
-  Stream
-  Backfill soils excavation area
-  Burn trench
-  Catchment basin
-  Excavation area
-  Repository

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Mine: Georeferenced Montana DEQ (2018)
 Background: ESRI World Imagery (2019)



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**FIGURE 4
 SITE FEATURES MAP
 EVENING STAR MINE
 NEIHART, CASCADE COUNTY,
 MONTANA**

Date: 12/30/2019

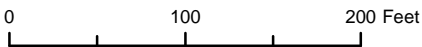


Legend:

-  Mine
-  Sampling Zone

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Mine: Georeferenced Montana DEQ (2018)
Background: ESRI World Imagery (2019)



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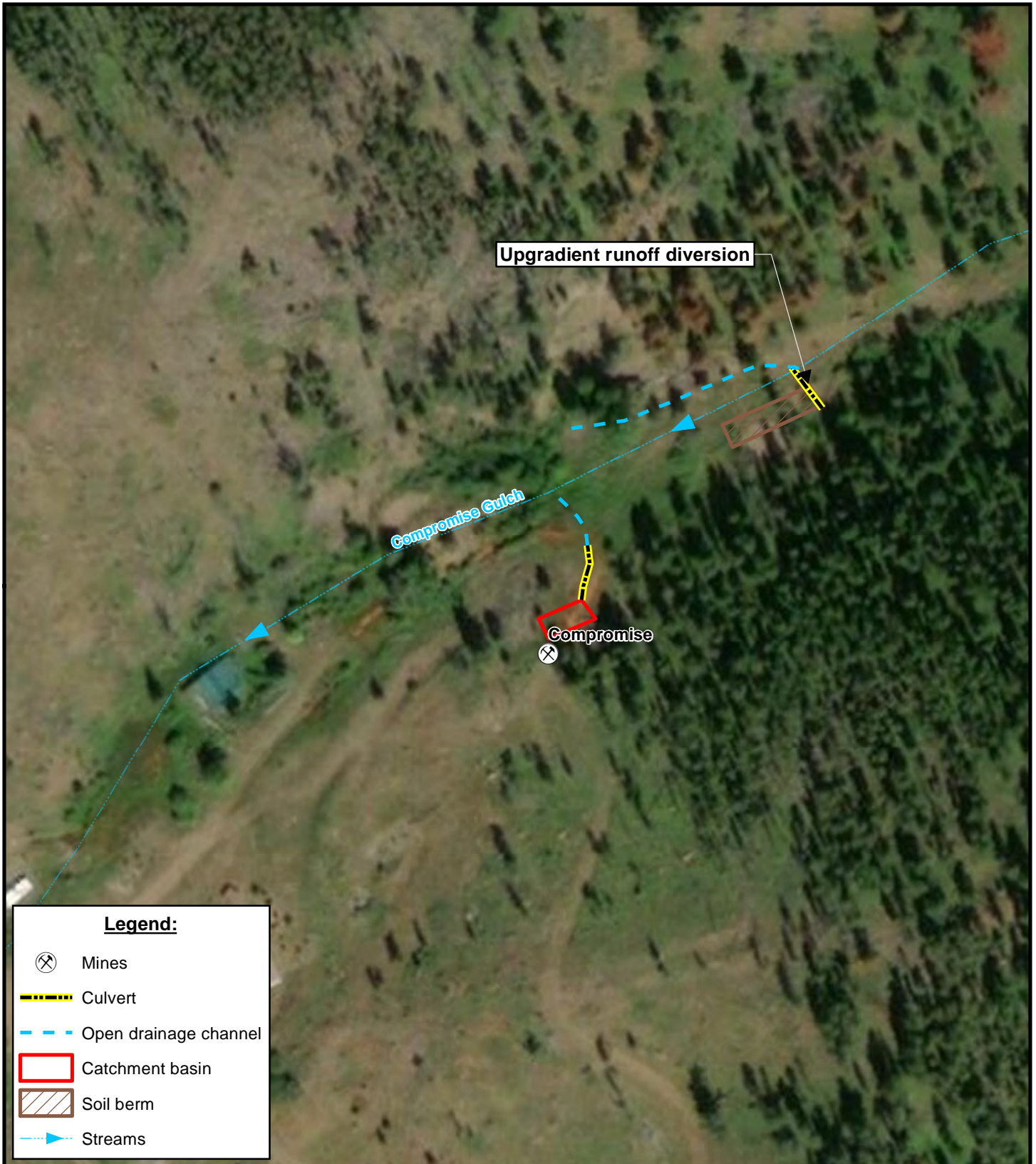
Contract: EP-S8-13-01
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**FIGURE 5
EVENING STAR SAMPLING ZONES
EVENING STAR MINE
NEIHART, CASCADE COUNTY,
MONTANA**

Date: 12/23/2019

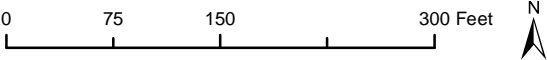


Legend:

- Mines
- Culvert
- Open drainage channel
- Catchment basin
- Soil berm
- Streams

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Mines: Georeferenced Montana DEQ (2018)
Background: ESRI World Imagery (2018)



Prepared for:
U.S. EPA - Region 8



Contract: EP-S8-13-01
TO/TDD: 0001/1902-07

Prepared By:
Weston Solutions, Inc.
START IV
Suite 100
1435 Garrison St.
Lakewood, CO



FIGURE 6
SITE FEATURES MAP
COMPROMISE MINE
NEIHART, CASCADE COUNTY,
MONTANA

Date: 12/30/2019

Tables

Table 1 - Lime Concentrations of START Treatability Study Samples

Sample	Soil (grams)	Lime (grams)	Lime % of Sample
ES-10-07232019-02	233	10.1	
	233	10.5	
	215	5.5	
	284	8.4	
	306		
	212		
	233		
Total Mass (grams)	1716	34.5	1.97%
Calculated 2% of Soil	34.32		
Sample	Soil (grams)	Lime (grams)	Lime % of Sample
ES-10-07232019-04	223	17.1	
	284	11.4	
	392	15.2	
	271	9.2	
	177	1.4	
Total Mass (grams)	1347	54.3	3.87%
Calculated 4%	53.88		
Sample	Soil (grams)	Lime (grams)	Lime % of Sample
ES-10-07232019-06	241	13.5	
	261	14.8	
	332	12.8	
	222	13.8	
	184	13.4	
		6.7	
Total Mass (grams)	1240	75	5.70%
Calculated 6%	74.4		
Sample	Soil (grams)	Lime (grams)	Lime % of Sample
ES-10-07232019-08	203	18	
	246	19.4	
	221	20.7	
	269	20.1	
	220	14.9	
Total Mass (grams)	1159	93.1	7.44%
Calculated 8%	92.72		
Sample	Soil (grams)	Lime (grams)	Lime % of Sample
ES-10-07232019-10	178	20.3	
	224	19.9	
	263	16.7	
	140	15.9	
		8.2	
Total Mass (grams)	805	81	9.14%
Calculated 10%	80.5		

Table 2 - Evening Star Mine START Treatability Study Data Summary

		Sample ID		ES-10-07232019-02	ES-10-07232019-04	ES-10-07232019-06	ES-10-07232019-08	ES-10-07232019-10
		Date and Time		7/23/2019 9:30	7/23/2019 9:55	7/23/2019 10:20	7/23/2019 10:45	7/23/2019 11:00
		EPA RSL Industrial THQ = 0.1	% Lime Concentration	2%	4%	6%	8%	10%
Analyte	Units	Location ID		ES-10	ES-10	ES-10	ES-10	ES-10
Metals		mg/kg						
Aluminum	mg/kg	110,000		720	720	787	699	615
Antimony	mg/kg	470		190	189	185	193	165
Arsenic	mg/kg	3		1,370	1,370	1,390	1,410	1,370
Barium	mg/kg	22,000		148	216	186	202	89.7
Beryllium	mg/kg	230		18 U	21 U	19 U	19 U	22 U
Cadmium	mg/kg	98		441	403	398	423	392
Calcium	mg/kg			13,000	25,300	26,000	33,900	55,000
Chromium	mg/kg	180,000		18 U	21 U	19 U	19 U	22 U
Cobalt	mg/kg	350		36.4	38.6	37.9	36.9	37.8
Copper	mg/kg	4,700		4,530	4,340	4,600	4,440	3,860
Iron	mg/kg	82,500		122,000	123,000	137,000	130,000	118,000
Lead	mg/kg	800		126,000	146,000	126,000	131,000	137,000
Magnesium	mg/kg			582	700	741	725	622
Manganese	mg/kg	2,640		372	441	535	372	457
Nickel	mg/kg	11,000		76.9	78.6	79.9	77.1	78.9
Potassium	mg/kg			3,600 U	4,100 U	3,900 U	3,700 U	4,400 U
Selenium	mg/kg	580		91 U	100 U	97 U	93 U	110 U
Silver	mg/kg	580		690	834	734	757	821
Sodium	mg/kg			178	209	251	249	880 U
Thallium	mg/kg			65.4	53.2	60.6	58.5	55.7
Vanadium	mg/kg	580		18 U	21 U	19 U	19 U	22 U
Zinc	mg/kg	35,000		114,000	110,000	109,000	111,000	107,000
		EPA Hazardous Waste Allowable Limit						
TCLP Metals		mg/L						
Aluminum	mg/L			1.0 U	0.1 U	0.1 U	0.1 U	0.1 U
Anitmony	mg/L			0.031	0.030 U	0.030 U	0.030 U	0.030 U
Arsenic	mg/L	5.0		0.25 U	2.5 U	2.5 U	2.5 U	2.5 U
Barium	mg/L	100.0		0.010 U	0.010 U	0.010 U	0.010 U	0.011
Beryllium	mg/L			0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Cadmium	mg/L	1.0		0.89	0.89	0.95	0.95	0.9
Calcium	mg/L			420	859	817	1,310	1,310
Chromium	mg/L	5.0		0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Cobalt	mg/L			0.36	0.42	0.4	0.35	0.37
Copper	mg/L			0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Iron	mg/L			169	110	62.6	0.41	7.5
Lead	mg/L	5.0		16.9	14.8	13.2	13.7	20.2
Magnesium	mg/L			12.2	14.1	13.7	16.5	15.3
Manganese	mg/L			11.3	13.9	14.9	14.4	14.5
Nickel	mg/L			1.1	1.2	1.3	1.2	1.3
Potassium	mg/L			5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Selenium	mg/L	1.0		0.50 U	0.050 U	0.050 U	0.050 U	0.50 U
Silver	mg/L	5.0		0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Thallium	mg/L			0.10 U	0.10 U	0.10 U	0.21	0.20 U
Vanadium	mg/L			0.010 U	0.10 U	0.10 U	0.10 U	0.10 U
Zinc	mg/L			328	330	321	294	261

Note: Bold type indicates the sample result is above the contract required quantitation limit.

Exceed EPA RSL for Industrial Soil

Exceed EPA Hazardous Waste Allowable Limit

Key:

mg/kg = milligrams per kilogram.

mg/L = milligrams per liter.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Table 3 - Building Material Wood Data Summary

		Sample	EM-01-WD-10032019
		Date and Time	10/3/2019 1305
		Location	EM-01-WD
Analyte	Units	Description	Wood from building sturcutres
Polychlorinated Biphenyls (PCBs)			
Aroclor 1016	ug/kg		110 U
Aroclor 1221	ug/kg		110 U
Aroclor 1232	ug/kg		110 U
Aroclor 1242	ug/kg		110 U
Aroclor 1248	ug/kg		110 U
Aroclor 1254	ug/kg		110 U
Aroclor 1260	ug/kg		110 U
Aroclor 1262	ug/kg		110 U
Aroclor 1268	ug/kg		110 U
Total PCBs	ug/kg		110 U
Semi-Volatile Organic Compounds (SVOCs)			
1,2,4-Trichlorobenzene	ug/kg		440 U
1,2-Dichlorobenzene	ug/kg		440 U
1,2-Diphenylhydrazine	ug/kg		440 U
1,3-Dichlorobenzene	ug/kg		440 U
1,4-Dichlorobenzene	ug/kg		440 U
1-Methylnaphthalene	ug/kg		440 U
2,2'-Oxybis(1-chloropropane)	ug/kg		440 U
2,4,5-Trichlorophenol	ug/kg		440 U
2,4,6-Trichlorophenol	ug/kg		440 U
2,4-Dichlorophenol	ug/kg		440 U
2,4-Dimethylphenol	ug/kg		440 U
2,4-Dinitrophenol	ug/kg		2200 U
2,4-Dinitrotoluene	ug/kg		440 U
2,6-Dinitrotoluene	ug/kg		440 U
2-Chloronaphthalene	ug/kg		440 U
2-Chlorophenol	ug/kg		440 U
2-Methylnaphthalene	ug/kg		440 U
2-Methylphenol	ug/kg		440 U
2-Nitroaniline	ug/kg		440 U
2-Nitrophenol	ug/kg		440 U
3,3'-Dichlorobenzidine	ug/kg		440 U
3-Nitroaniline	ug/kg		440 U
4,6-Dinitro-o-cresol	ug/kg		2200 U
4-Bromophenyl phenyl ether	ug/kg		440 U
4-Chloro-3-methyl phenol	ug/kg		440 U
4-Chloroaniline	ug/kg		440 U
4-Chlorophenyl phenyl ether	ug/kg		440 U
4-Methylphenol	ug/kg		440 U

Table 3 - Building Material Wood Data Summary

4-Nitroaniline	ug/kg		440 U
4-Nitrophenol	ug/kg		2200 U
Acenaphthene	ug/kg		440 U
Acenaphthylene	ug/kg		215 J
Aniline	ug/kg		1700 U
Anthracene	ug/kg		440 U
Benzidine	ug/kg		5500 U
Benzo(a)anthracene	ug/kg		505
Benzo(a)pyrene	ug/kg		274 J
Benzo(b)fluoranthene	ug/kg		792
Benzo(g,h,i)perylene	ug/kg		308 J
Benzo(k)fluoranthene	ug/kg		440 U
Benzoic Acid	ug/kg		4400 U
Benzyl Alcohol	ug/kg		440 U
bis(2-Chloroethoxy)methane	ug/kg		440 U
bis(2-Chloroethyl)ether	ug/kg		440 U
bis(2-Ethylhexyl)phthalate	ug/kg		1100 U
Butyl benzyl phthalate	ug/kg		440 U
Carbazole	ug/kg		174 J
Chrysene	ug/kg		958
Dibenzo(a,h)anthracene	ug/kg		440 U
Dibenzofuran	ug/kg		440 U
Diethyl phthalate	ug/kg		440 U
Dimethyl phthalate	ug/kg		440 U
Di-n-butyl phthalate	ug/kg		440 U
Di-n-octyl phthalate	ug/kg		1100 U
Fluoranthene	ug/kg		974
Fluorene	ug/kg		440 U
Hexachlorobenzene	ug/kg		440 U
Hexachlorobutadiene	ug/kg		440 U
Hexachlorocyclopentadiene	ug/kg		440 U
Hexachloroethane	ug/kg		440 U
Indeno(1,2,3-cd)pyrene	ug/kg		386 J
Isophorone	ug/kg		440 U
Naphthalene	ug/kg		440 U
Nitrobenzene	ug/kg		440 U
N-Nitrosodimethylamine	ug/kg		440 U
N-Nitroso-di-n-propylamine	ug/kg		440 U
N-Nitrosodiphenylamine	ug/kg		440 U
Pentachlorophenol	ug/kg		440 U
Phenanthrene	ug/kg		440 U
Phenol	ug/kg		440 U
Pyrene	ug/kg		701
Pyridine	ug/kg		440 U

Table 3 - Building Material Wood Data Summary

Total Metals			
Aluminum	mg/kg		11.8
Antimony	mg/kg		1.2
Arsenic	mg/kg		0.55 U
Barium	mg/kg		11.4
Beryllium	mg/kg		0.27 U
Cadmium	mg/kg		0.22 U
Calcium	mg/kg		270 U
Chromium	mg/kg		0.55 U
Cobalt	mg/kg		2.7 U
Copper	mg/kg		2.8
Iron	mg/kg		69.4
Lead	mg/kg		61
Magnesium	mg/kg		270 U
Manganese	mg/kg		22.6
Mercury	mg/kg		0.045 U
Nickel	mg/kg		2.2 U
Potassium	mg/kg		550 U
Selenium	mg/kg		1.1 U
Silver	mg/kg		0.55 U
Sodium	mg/kg		550 U
Thallium	mg/kg		0.55 U
Vanadium	mg/kg		2.7 U
Zinc	mg/kg		17.2

Bold type indicates the sample result is above the contract required quantitation limit.

Note:

Key:

mg/kg = milligrams per kilogram.

J = The analyte was positively identified. The associated numerical value is an estimate.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

ug/kg = micrograms per kilogram

Table 4 - Particulate Matter Air Monitoring Time-Weighted Average

Date	Station	NAAQS 24-Hour TWA PM _{2.5} (mg/m ³)	PM _{2.5} TWA (mg/m ³)	NAAQS 24-Hour TWA PM ₁₀ (mg/m ³)	PM ₁₀ TWA (mg/m ³)
10/9/2019	ES-DT-01	0.035	0.002	0.150	0.003
10/9/2019	ES-DT-02	0.035	0.000	0.150	0.000
10/10/2019	ES-DT-01	0.035	0.005	0.150	0.005
10/10/2019	ES-DT-02	0.035	0.000	0.150	0.000
10/11/2019	ES-DT-01	0.035	0.002	0.150	0.002
10/11/2019	ES-DT-02	0.035	0.000	0.150	0.000
10/12/2019	ES-DT-01	0.035	0.001	0.150	0.001
10/12/2019	ES-DT-02	0.035	0.000	0.150	0.000
10/13/2019	ES-DT-01	0.035	0.003	0.150	0.004
10/13/2019	ES-DT-02	0.035	0.002	0.150	0.002
10/14/2019	ES-DT-01	0.035	0.002	0.150	0.002
10/14/2019	ES-DT-02	0.035	0.018	0.150	0.018
10/15/2019	ES-DT-01	0.035	0.004	0.150	0.004
10/15/2019	ES-DT-02	0.035	0.001	0.150	0.001
10/16/2019	ES-DT-01	0.035	0.007	0.150	0.008
10/16/2019	ES-DT-02	0.035	0.010	0.150	0.010
10/17/2019	ES-DT-01	0.035	0.006	0.150	0.007
10/17/2019	ES-DT-02	0.035	0.008	0.150	0.008
10/18/2019	ES-DT-01	0.035	0.001	0.150	0.001
10/18/2019	ES-DT-02	0.035	0.002	0.150	0.002
10/19/2019	ES-DT-01	0.035	0.002	0.150	0.003
10/19/2019	ES-DT-02	0.035	0.003	0.150	0.003
10/20/2019	ES-DT-01	0.035	0.002	0.150	0.002
10/20/2019	ES-DT-02	0.035	0.007	0.150	0.007
10/21/2019	ES-DT-01	0.035	0.001	0.150	0.001
10/21/2019	ES-DT-02	0.035	0.010	0.150	0.010

Key:

mg/m³ = milligrams per cubic meter

NAAQS = National Ambient Air Quality Standards

PM_{2.5} = particulate matter 2.5 microns and smaller

PM₁₀ = particulate matter 10 microns and smaller

TWA = time-weighted average

Table 5 - Evening Star Post Excavation Data Summary

			Sample	EM-01-SO-10122019	EM-02-SO-10122019	EM-03-SO-10122019
			Date and Time	10/12/2019 10:40	10/12/2019 10:55	10/12/2019 11:10
		EPA RSL	Location ID	EM-01	EM-02	EM-03
		Industrial	Description	Post Excavation Area	Post Excavation Area	Post Excavation Area
Analyte	Units	THQ = 0.1				
Total Metals		mg/kg				
Arsenic	mg/kg	3.0		58.5	215	135
Barium	mg/kg	22000.0		281	441	552
Cadmium	mg/kg	98.0		10.9	52.6	38.3
Chromium	mg/kg	180000.0		51 U	53 U	54 U
Lead	mg/kg	800.0		17,300	23,700	20,200
Mercury	mg/kg	4.6		0.83 U	0.93 U	0.34
Selenium	mg/kg	580.0		9.1	11.7	5.9
Silver	mg/kg	580.0		36.2	186	166

Note: Bold type indicates the sample result is above the contract required quantitation limit.

 Exceed EPA RSL for Industrial Soil

Key:

mg/kg = milligrams per kilogram.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Table 5 - Evening Star Post Excavation Data Summary

			Sample	EM-04-SO-10122019	EM-05-SO-10122019	EM-06-SO-10122019	EM-07-SO-10122019
			Date and Time	10/12/2019 11:45	10/12/2019 11:40	10/12/2019 12:10	10/12/2019 12:25
		EPA RSL	Location ID	EM-04	EM-05	EM-06	EM-07
		Industrial	Description	Post Excavation Area	Post Excavation Area	Post Excavation Area	Post Excavation Area
Analyte	Units	THQ = 0.1					
Total Metals		mg/kg					
Arsenic	mg/kg	3.0		125	58.9	10.3	32.1
Barium	mg/kg	22000.0		740	160	162	672
Cadmium	mg/kg	98.0		14.6	65.6	1.5	32.6
Chromium	mg/kg	180000.0		52 U	58 U	37.7	57 U
Lead	mg/kg	800.0		12,300	60,700	917	2,690
Mercury	mg/kg	4.6		0.5	0.28	0.32	0.36
Selenium	mg/kg	580.0		6.7	5.8	5.1 U	5.7 U
Silver	mg/kg	580.0		85.2	50.8	5.3	40.6

Note: Bold type indicates the sample result is above the contract required quantitation limit.

 Exceed EPA RSL for Industrial Soil

Key:

mg/kg = milligrams per kilogram.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Table 5 - Evening Star Post Excavation Data Summary

			Sample	EM-08-SO-10122019	EM-09-SO-10122019	EM-10-SO-10122019	EM-11-SO-10122019
			Date and Time	10/12/2019 12:40	10/12/2019 14:10	10/12/2019 14:20	10/12/2019 14:40
		EPA RSL	Location ID	EM-08	EM-09	EM-10	EM-11
		Industrial	Description	Post Excavation Area	Post Excavation Area	Post Excavation Area	Post Excavation Area
Analyte	Units	THQ = 0.1					
Total Metals		mg/kg					
Arsenic	mg/kg	3.0		183	243	41.5	89.6
Barium	mg/kg	22000.0		1270	237	248	466
Cadmium	mg/kg	98.0		30.8	40.9	5.8	17.2
Chromium	mg/kg	180000.0		55 U	11 U	59 U	49 U
Lead	mg/kg	800.0		8,230	11,100	19,500	3,400
Mercury	mg/kg	4.6		0.49	0.18	0.14	0.38
Selenium	mg/kg	580.0		7.5	55 U	9.6	12.9
Silver	mg/kg	580.0		185	40.1	32.3	46.7

Note: Bold type indicates the sample result is above the contract required quantitation limit.

 Exceed EPA RSL for Industrial Soil

Key:

mg/kg = milligrams per kilogram.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Table 5 - Evening Star Post Excavation Data Summary

			Sample	EM-12-SO-10122019	EM-13-SO-10142019	EM-14-SO-10142019
		Date and Time		10/12/2019 12:10	10/13/2019 13:10	10/13/2019 13:10
		EPA RSL	Location ID	EM-06	EM-13	EM-13
		Industrial	Description	Post Excavation Area	Pathway along open channel	Pathway along open channel
Analyte	Units	THQ = 0.1				
Total Metals		mg/kg				
Arsenic	mg/kg	3.0		13.3	9.2	9.4
Barium	mg/kg	22000.0		1280	377	286
Cadmium	mg/kg	98.0		2.9	6.4	3.4
Chromium	mg/kg	180000.0		56 U	53 U	60 U
Lead	mg/kg	800.0		967	1,920	851
Mercury	mg/kg	4.6		0.093 U	0.1 U	0.094 U
Selenium	mg/kg	580.0		5.6 U	10.9	6
Silver	mg/kg	580.0		4.8	12.3	12

Note: Bold type indicates the sample result is above the contract required quantitation limit.

 Exceed EPA RSL for Industrial Soil

Key:

mg/kg = milligrams per kilogram.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Table 6 - Repository Sample Data Summary

			Sample	EM-15-SO-10142019	EM-15-SO-10212019	EM-15-SS-12-10212019
			Date and Time	10/14/2019 16:05	10/21/2019 12:10	10/21/2019 12:35
			Location ID	EM-15	EM-15	EM-15
		EPA RSL Industrial THQ = 0.1	Description	Repository soils prior to treatment	Repository surface soil after treatment	Repository soils 1 foot below ground surface after treatment
Analyte	Units					
Total Metals		mg/kg				
Arsenic	mg/kg	3.0		114	140 U	130 U
Barium	mg/kg	22000.0		485	839	783
Cadmium	mg/kg	98.0		27.2	57 U	53 U
Chromium	mg/kg	180000.0		53 U	57 U	53 U
Lead	mg/kg	800.0		15,100	6,550	11,900
Mercury	mg/kg	4.6		0.37	0.28	0.33
Selenium	mg/kg	580.0		6	290 U	270 U
Silver	mg/kg	580.0		102	170 U	160 U
		EPA Hazardous Waste Allowable Limit				
TCLP Metals		mg/L				
Arsenic	mg/L	5.0		0.025 U	0.025 U	0.025 U
Barium	mg/L	100.0		0.38	0.31	0.3
Cadmium	mg/L	1.0		0.14	0.01 U	0.01 U
Chromium	mg/L	5.0		0.01 U	0.01 U	0.01 U
Lead	mg/L	5.0		62.8	0.05 U	0.05 U
Mercury	mg/L	0.2		0.0001 U	0.0001 U	0.0001 U
Selenium	mg/L	1.0		0.05 U	0.05 U	0.05 U
Silver	mg/L	5.0		0.03 U	0.03 U	0.03 U

Note: Bold type indicates the sample result is above the contract required quantitation limit.

- Exceed EPA RSL for Industrial Soil
- Exceed EPA Hazardous Waste Allowable Limit

Key:

- mg/kg = milligrams per kilogram.
- mg/L = milligrams per liter.
- THQ = Target Hazard Quotient
- U = The analyte was not detected at or above the associated value.

Table 7 - Backfill and Top Soil Sample Data Summary

			Sample	EM-16-SO-10162019	EM-17-SO-10182019	EM-18-SO-10192019
			Date and Time	10/16/2019 10:30	10/18/2019 10:15	10/19/2019 9:50
			Location	EM-16	EM-17	EM-18
		EPA RSL Industrial THQ = 0.1	Description	Imported Top Soil	Backfill soil harvested from site	Imported Top Soil
Analyte	Units					
Total Metals		mg/kg				
Arsenic	mg/kg	3.0		12.9	14.2	25 U
Barium	mg/kg	22000.0		169	265	948
Cadmium	mg/kg	98.0		1 U	1.8	10 U
Chromium	mg/kg	180000.0		8.7	16.3	10 U
Lead	mg/kg	800.0		40.6	484	404
Mercury	mg/kg	4.6		0.087	0.089 U	0.12
Selenium	mg/kg	580.0		5.2 U	4.9 U	51 U
Silver	mg/kg	580.0		3.1 U	3.6	30 U

Note: Bold type indicates the sample result is above the contract required quantitation limit.

Exceed EPA RSL for Industrial Soil

Key:

mg/kg = milligrams per kilogram.

mg/L = milligrams per liter.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.

Attachment A

**Evening Star and Compromise Mine RS, Evening Star and Compromise Mine RV – Final
Letter Report**



Weston Solutions, Inc.
1435 Garrison Street, Suite 100
Lakewood, Colorado 80215
303-729-6100 • Fax: 303-729-6101
www.westonsolutions.com

September 9, 2019

Mr. Duc Nguyen
On-Scene Coordinator
United States Environmental Protection Agency, Region VIII
Mail Code: 8EPR-ER
1595 Wynkoop Street
Denver, CO 80202

Re: Evening Star and Compromise Mine RS, Evening Star and Compromise Mine RV – Final Letter Report
Neihart, Cascade County, Montana
TDD: 0001/1807-03, 0001/1902-07
DCN: W0678.1A.02097
WO#: 20408.012.001.0678.00

Dear Mr. Nguyen:

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc., (WESTON®) Superfund Technical Assessment and Response Team (START) under Technical Direction Document (TDD) 0001/1807-03 and 0001/1902-07 to support U.S. EPA's removal program at the *Evening Star and Compromise Mine RS* and *Evening Star and Compromise Mine RV* site in Neihart, Cascade County, Montana.

SITE DESCRIPTION AND BACKGROUND

The Evening Star Mine site (46.944283° North and 110.747016° West) is located along Highway 89 in Neihart, Cascade County, Montana. (Attachment A, Figures 1 and 2) and contains a discharging adit from which water flows downhill and continues under Highway 89 to intersect with Belt Creek. The culvert under Highway 89 adjacent to the Evening Star mine has become filled with silt, causing water to flow over Highway 89 at times. The Evening Star mine property has several structures which have become deteriorated due to age and lack of upkeep. Previous soil investigations have indicated the presence of metals contaminated waste rock immediately adjacent to the existing structures at the Evening Star mine (TT, 2018).

The Compromise Mine site (46.935977° North and 110.735482° West) is located approximately 1,000 feet East of N. Main St. in Neihart, Cascade County, Montana (Attachment A, Figures 1 and 2) and contains a discharging shaft from which water flows downhill and continues under Highway 89 (separately from the Evening Star discharge) to intersect with Belt Creek as well. There are no buildings associated with the mine developed at the site.

TDD: 0001/1807-03, 0001/1902-07

This document was prepared by Weston Solutions, Inc., expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

SAMPLING ACTIVITIES

On July 26, 2018 U.S. EPA On Scene Coordinator Duc Nguyen, and two START members, Michael Worden and Elliott Petri, mobilized to conduct surface and subsurface evaluation at the site. On this date EPA and START conducted a site walk of both mines to identify sampling locations and discuss the anticipated work to be done.

On July 27, 2018, START conducted sampling at the Evening Star and Compromise Mines under the direction of the EPA. Tetra Tech was also present during the sampling to assist with the site remedy design to be prepared by Tetra Tech.

On July 16, 2019 U.S. EPA On Scene Coordinators Duc Nguyen and Craig Giggelman, START Michael Worden, and Emergency Response and Rapid Services (ERRS) contractor performed a site walk to discuss planned removal activities in preparation for meetings on July 17, 2019. During the site walk EPA requested START collect a sample (location ES-11) at the Evening Star Mine in addition to the treatability study samples coll.

Evening Star Mine

On July 26, 2018, START conducted a surface and sub-surface soil investigation, a field x-ray fluorescence (XRF) surface soil screening, and a limited asbestos sampling event at the Evening Star Mine (Figure 3). The soil investigation utilized a post-hole auger. However, drilling was limited to an approximate depth of 12 inches below ground surface (bgs) due to refusal from large rocks. Materials were collected from the lowest attainable depth (0 – 12 inches bgs). A total of eight samples were collected from 7 locations (locations ES-01 through ES-07) for analysis of RCRA 8 metals and TCLP metals. The samples were placed into laboratory provided jars, labeled, stored on ice, and shipped to SGS in Wheat Ridge, Colorado (CO).

XRF screening was conducted at various locations to assist with defining areas of mining impacted surface soil. The XRF was field standardized and had seven screenings of a known standard soil throughout the screening process. No samples were collected from the XRF field screening locations. See Attachment A, Figure 3 for all sampling and XRF screening locations at the Evening Star Mine.

A limited asbestos sampling was conducted from two observed materials. Three samples of each miscellaneous material were collected, double-bagged, stored, and delivered to Reservoirs Environmental in Denver, CO.

On July 16, 2019, START collected a single surface soil sample (ES-11-07162019) of suspected slag material for total metals and TCLP metals analysis. The sample was submitted to SGS in Wheat Ridge, CO.

Compromise Mine

START conducted soil and water sampling at the Compromise mine (Figure 4). Surface water grab samples were collected from downstream of the discharge of the mine (CM-01), the discharge

from the mine shaft (CM-02), and water flowing onto the site from an up gradient source (locations CM-03 and CM-04[duplicate of CM-03]).

Composite soil samples were collected from the grassy field area adjacent to the mine discharge (CM-05 and CM-07[duplicate of CM-05]) and from the marshy/wetlands area east of the mine discharge (CM-06). See Attachment A, Figure 4 for all sampling locations at the Compromise Mine.

SAMPLING RESULTS

Evening Star Mine

All samples collected at the Evening Star mine contained concentrations of metals (arsenic, cadmium, and lead) exceeding screening levels (Table 1). The highest concentrations identified at the Evening Star Mine site were with respect to lead. The reported soil lead concentrations and the toxicity concentrate leachate procedure (TCLP) leachate lead concentrations were lowest at locations ES-03 and ES-04, which were collected from within the existing repository cap. Both cap samples were hand augered in order to estimate the quantity of cap material used for construction of the repository at the Evening Star mine. While the cap material soil results for lead exceeded the EPA regional screening level (RSL) for industrial soil (800 milligrams per kilogram [mg/kg]), the leachate analytical results did not exceed the EPA hazardous waste allowable limit for lead (5 milligrams per liter [mg/L]). The sample collected at location ES-03 was the only sample at the Evening Star mine which did not exceed both the EPA RSL for industrial soil and the EPA hazardous waste allowable limit for lead in leachate. The sample collected at location ES-04 did exceed the lead EPA RSL for industrial soil but did not exceed the EPA hazardous waste allowable limit for lead in leachate.

Additional findings include the following:

- The highest lead concentrations were from the samples collected inside the wooden building (ES-05) and metal building (ES-06) (Figure 3). The soil lead concentrations for ES-05 and ES-06 were reported as 39,700 mg/kg and 148,000 mg/kg, respectively.
- Soil samples at locations ES-01, ES-02, ES-05, ES-06, ES-07, and ES-11 exceeded the EPA RSL for lead for industrial soil of 800 mg/kg, ranging from 1,050 – 148,000 mg/kg.
- Soil samples at locations ES-01, ES-02, ES-05, ES-06, ES-07, and ES-11 exceeded the EPA hazardous waste allowable limit of 5.0 mg/L for lead, ranging from 6.8 – 81.5 mg/L.
- All soil samples collected exceeded the EPA RSL for arsenic for industrial soil (3.0 mg/kg), ranging from 20.3 – 1,490 mg/kg.
- Soil samples collected at locations ES-05 and ES-06 exceeded the EPA RSL for cadmium for industrial soil (98 mg/kg) with results of 163 mg/kg and 352 mg/kg, respectively.
- Sample ES-06 was the only sample to exceed the EPA RSL for silver for industrial soil (580 mg/kg) at 732 mg/kg.
- Sample ES-06 was the only sample found to exceed the EPA hazardous waste allowable limit of 1.0 mg/L for cadmium at 1.4 mg/L.

A limited asbestos assessment at the Evening Star mine was conducted, which included collecting three samples each from two suspect materials (roofing material and insulation). Of the six samples collected and analyzed using the Polarized Light Microscopy (PLM) method, all were non-detect for asbestos. While the roofing material (RM01) and insulation (IN01) were analyzed by PLM and determined to not contain asbestos, it cannot be ruled out that asbestos will not be

TDD: 0001/1807-03, 0001/1902-07

encountered during demolition of the buildings due to the potential for suspect materials being contained within inaccessible areas of the buildings (i.e. inaccessible rooms, inside walls, etc.). The PLM analytical report can be found in Attachment D.

See Attachment B, Table 1 for all Evening Star mine data summary results. XRF field screening results can be found in Attachment B, Table 2. See Attachment A, Figure 3 for all Evening Star sampling and XRF field screening locations. See Attachment C for the laboratory analytical report for the soil and water, and Attachment D for the laboratory analytical report for asbestos.

Compromise Mine

While the Compromise mine soil samples contained generally lower concentrations of arsenic and lead than those of the Evening Star mine, the concentrations were still elevated ranging from 67.1 to 141 mg/kg for arsenic and 1,660 to 9,400 mg/kg for lead, respectively (Table 3).

The sample from location CM-06 exceeded the EPA hazardous waste allowable limit for lead and the EPA RSL for cadmium for industrial soil. This location was collected from the nearby wetland through which the mine shaft discharge has historically flowed.

Soil sample results for the Compromise mine are provided in Table 3. Sample location CM-07 is a duplicate of Sample CM-05. Locations of all samples collected at the Compromise mine can be seen in Figure 4.

Water samples collected at the Compromise mine were reported with detections above the laboratory reporting limit for barium only; all other analytes were below the laboratory reporting limits (Table 4). The pH of the four samples were neutral, ranging from 6.63 – 7.62. Location CM-03 and CM-04 contained the highest concentrations of total barium at 52.7 and 52.6 micrograms per liter ($\mu\text{g/L}$) respectively, and dissolved barium at 52.1 and 53.2 $\mu\text{g/L}$ respectively. Location CM-03 and CM-04 are upstream and upgradient of the shaft discharge. Water sample results for the Compromise mine can be seen in Attachment B, Table 4.

CONCLUSIONS

As a result of the previous sampling investigations and the sampling conducted at the Evening Star and Compromise mines on July 27, 2018, and July 16, 2019, contamination was confirmed in the soils around both mines, as well as within the structures of the Evening Star mine. Concentrations of lead in soil leachate water exceeding the EPA hazardous waste allowable limit (5.0 mg/L) were identified at both mine sites.

Future work is anticipated to address some of the contamination and the adit discharge flow pathway at both the Evening Star and Compromise mines in 2019. All work planning and design planning for future activities will be conducted separately from this report.

This final report will be the final TDD deliverable for these sampling events, per the request of EPA On Scene Coordinator Duc Nguyen. If there are any questions or comments regarding this report, please do not hesitate to contact me at 303-729-6131, or Robert Reed, Project Manager, at 303-729-6113.

Very truly yours,

WESTON SOLUTIONS, INC.

Michael Worden
START Project Leader

Attachment:

- A – Figures
- B – Tables
- C – Soil and Water Sample Analytical Report
- D – PLM Analytical Report

cc: Robert Reed, Project Manager
START DCN File

REFERENCES

Tetra Tech, Inc. (TT), 2018. *DRAFT Evening Star Tailings and Waste Rock Sampling Technical Memorandum*. Helena, Montana.

Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
TT, 2018	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

EPA, 2018. *Technical Direction Document (TDD) 0001/1807-03*.

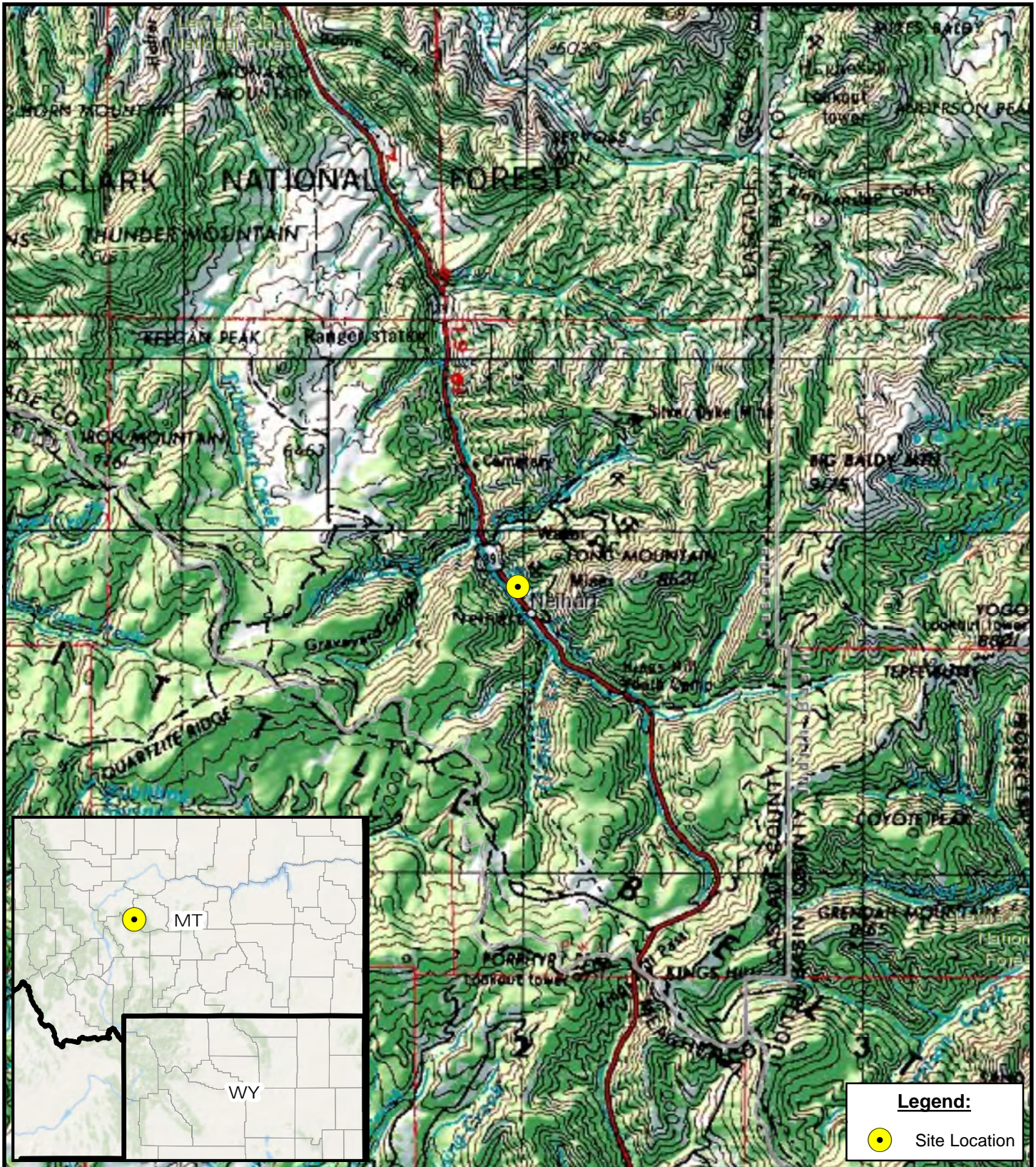
Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
EPA, 2018	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

EPA, 2019. *Technical Direction Document (TDD) 0001/1902-07*.


Citation	Reference Type	Assessment Factor				
		Soundness	Applicability and Utility	Clarity and Completeness	Uncertainty and Variability	Evaluation and Review
EPA, 2019	Document	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable

Attachment A

Figures

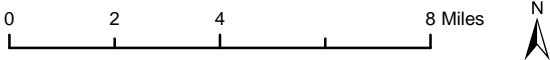


Legend:

 Site Location

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Site Boundary:
 Background: ESRI USA Topo Maps (2017)



Prepared for:
 U.S. EPA - Region 8



Contract: EP-S8-13-01
 TO/TDD: 0001/1807-03 -
 0001/1902-07

Prepared By:
 Weston Solutions, Inc.
 START IV
 Suite 100
 1435 Garrison St.
 Lakewood, CO





FIGURE 1
SITE LOCATION MAP
EVENING STAR AND COMPROMISE MINES
NEIHART, CASCADE COUNTY,
MONTANA

Date: 9/5/2019

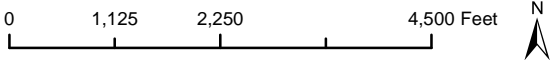


Legend:

-  Mines
-  USA Detailed Streams

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Mines: Georeferenced Montana DEQ (2018)
 Background: Bing Hybrid (2013)



Prepared for:
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 TO/TDD: 0001/1807-03 -
 0001/1902-07

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 Lakewood, CO







FIGURE 2
SITE VICINITY MAP
EVENING STAR AND COMPROMISE MINES
NEIHART, CASCADE COUNTY,
MONTANA

Date: 9/5/2019

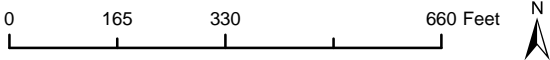


Legend:

-  Soil Samples
-  XRF Monitoring
-  Mines
-  Streams

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
 Projection: Mercator Auxiliary Sphere
 Datum: WGS 1984

Source:
 Mines: Georeferenced Montana DEQ (2018)
 Background: ESRI World Imagery (2018)



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Contract: EP-S8-13-01
 TO/TDD: 0001/1807-03 -
 0001/1902-07

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 Lakewood, CO



FIGURE 3
SAMPLE LOCATIONS MAP
EVENING STAR MINE
NEIHART, CASCADE COUNTY,
MONTANA

Date: 9/5/2019

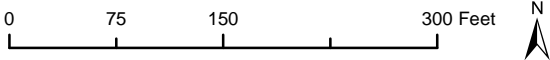


Legend:

- Sample Locations
- ⊗ Mines
- Streams

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Mines: Georeferenced Montana DEQ (2018)
Background: ESRI World Imagery (2018)



Prepared for:
U.S. EPA - Region 8



Contract: EP-S8-13-01
TO/TDD: 0001/1807-03 -
0001/1902-07

Prepared By:
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Lakewood, CO



FIGURE 4
SAMPLE LOCATIONS MAP
COMPROMISE MINE
NEIHART, CASCADE COUNTY,
MONTANA

Date: 9/5/2019

Attachment B

Tables

Table 1 - Evening Star Mine Data Summary

		EPA RSL	ES-01-SS-00	ES-01-SS-12	ES-02-SS-12	ES-03-SS-12	ES-04-SS-06	ES-05-SS-00	ES-06-SS-00	ES-07-SS-06	ES-11-07162019
		Industrial	7/27/2018 8:00	7/27/2018 8:10	7/27/2018 9:00	7/27/2018 9:10	7/27/2018 9:20	7/27/2018 9:35	7/27/2018 10:00	7/27/2018 10:25	7/26/2019 20:35
Analyte	Units	THQ = 0.1	ES-01	ES-01	ES-02	ES-03	ES-04	ES-05	ES-06	ES-07	ES-11
Metals		mg/kg									
Arsenic	mg/kg	3.0	112	76.4	120	20.3	25.2	515	1,490	48.1	128
Barium	mg/kg	22,000	331	753	658	549	852	245	133	535	368
Cadmium	mg/kg	98	8.2	8.8	22.6	2.3	4.1	163	352	15.6	30.4
Chromium	mg/kg	<22 U	16.2	27.8	18.5	29.3	24	<24 U	33.2	22.4	
Lead	mg/kg	800	9,280	8,920	17,200	566	1,050	39,700	148,000	8,920	27,000
Mercury	mg/kg	4.6	0.20	0.18	0.36	<0.099 U	<0.088 U	0.96	3.1	0.22	NA
Selenium	mg/kg	580	18.3	13.2	16.8	<6.1 U	6.5	<110 U	<120 U	25.1	<100 U
Silver	mg/kg	580	17.5	32.4	95.9	5.5	8.6	262	732	62.7	<61 U
		EPA Hazardous Waste Allowable Limit									
TCLP Metals		mg/L									
Arsenic	mg/L	5.0	<0.025 U	<0.025 U	<0.025 U	0.034	<0.025 U	<0.025 U	<2.5 U	<0.025 U	<2.5 U
Barium	mg/L	100.0	<1.0 U	<1.0 U	1.3	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	0.29
Cadmium	mg/L	1.0	0.070	0.11	0.25	<0.010 U	0.037	0.52	1.4	0.097	<0.10 U
Chromium	mg/L	5.0	<0.010 U	<0.010 U	<0.010 U	<0.010 U	<0.010 U	0.018	<0.050 U	<0.010 U	<0.10 U
Lead	mg/L	5.0	49.8	34.6	24.6	<0.050 U	0.61	34.7	9.4	6.8	81.5
Mercury	mg/L	0.2	<0.000 10 U	<0.000 10 U	<0.000 10 U	<0.000 10 U	<0.000 10 U	<0.000 10 U	<0.000 10 U	<0.000 10 U	NA
Selenium	mg/L	1.0	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.15	<0.050 U	<0.50 U
Silver	mg/L	5.0	<0.030 U	<0.030 U	<0.030 U	<0.030 U	<0.030 U	<0.030 U	<0.15 U	<0.030 U	<0.030 U

Note: **Bold** type indicates the sample result is above the contract required quantitation limit.

Yellow Exceed EPA RSL for Industrial Soil

Blue Exceed EPA Hazardous Waste Allowable Limit

Key:

NA = not analyzed

mg/kg = milligrams per kilogram.

mg/L = milligrams per liter.

THQ = Target Hazard Quotient

U = The analyte was not detected at or above the associated value.



Table 2 - Evening Star XRF Field Screening Results

	XRF-08	XRF-09	XRF-10
	Across from building and adit discharge pathway	Corner of hill pathway	At roadway near old culvert
XRF Reading (ppm)			
Lead (Pb)	249	583	1,327
Zinc (Zn)	11,000	431	1,020
Arsenic (As)	--	432	55

Table 3 - Compromise Mine Soil Data Summary

		EPA RSL	CM-05-SS-00	CM-06-SS-00	CM-07-SS-00
		Industrial	7/27/2018 11:45	7/27/2018 11:55	7/27/2018 11:45
Analyte	Units	THQ = 0.1	CM-05	CM-06	CM-05
Metals		mg/kg			
Arsenic	mg/kg	3.0	67.1	141	68.3
Barium	mg/kg	22,000	1,480	547	1,440
Cadmium	mg/kg	98	11.5	118	11.3
Chromium	mg/kg		18.6	9.2	18.3
Lead	mg/kg	800	1,660	9,400	1,720
Mercury	mg/kg	4.6	0.21	0.54	0.29
Selenium	mg/kg	580	13.2	147	15.7
Silver	mg/kg	580	26.6	<11 U	20.1
		EPA Hazardous Waste Allowable Limit			
TCLP Metals		mg/L			
Arsenic	mg/L	5.0	<0.025 U	<0.025 U	<0.025 U
Barium	mg/L	100.0	1.0	1.1	1.1
Cadmium	mg/L	1.0	0.044	0.14	0.036
Chromium	mg/L	5.0	<0.010 U	<0.010 U	<0.010 U
Lead	mg/L	5.0	0.11	8.6	0.063
Mercury	mg/L	0.2	<0.000 10 U	<0.000 10 U	<0.000 10 U
Selenium	mg/L	1.0	<0.050 U	<0.050 U	<0.050 U
Silver	mg/L	5.0	<0.030 U	<0.030 U	<0.030 U

Note: Bold type indicates the sample result is above the contract required quantitation limit.

 Exceed EPA RSL for Industrial Soil
 Exceed EPA Hazardous Waste Allowable Limit

Key:
 mg/kg = milligrams per kilogram.
 mg/L = milligrams per liter.
 THQ = Target Hazard Quotient
 U = The analyte was not detected at or above the associated value.

Table 4 - Compromise Mine Water Data Summary

		CM-01-WT-00	CM-02-WT	CM-03-WT	CM-04-WT
		7/27/2018 11:25	7/27/2018 11:30	7/27/2018 11:35	7/27/2018 11:35
Analyte	Units	CM-01	CM-02	CM-03	CM-03
Total Metals					
Arsenic	µg/L	<25 U	<25 U	<25 U	<25 U
Barium	µg/L	14.7	12.8	52.7	52.6
Cadmium	µg/L	<10 U	<10 U	<10 U	<10 U
Chromium	µg/L	<10 U	<10 U	<10 U	<10 U
Lead	µg/L	<50 U	<50 U	<50 U	<50 U
Mercury	µg/L	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Selenium	µg/L	<50 U	<50 U	<50 U	<50 U
Silver	µg/L	<30 U	<30 U	<30 U	<30 U
Dissolved Metals					
Arsenic	µg/L	<25 U	<25 U	<25 U	<25 U
Barium	µg/L	15.0	12.3	52.1	53.2
Cadmium	µg/L	<10 U	<10 U	<10 U	<10 U
Chromium	µg/L	<10 U	<10 U	<10 U	<10 U
Lead	µg/L	<50 U	<50 U	<50 U	<50 U
Mercury	µg/L	<0.010 U	<0.010 U	<0.010 U	<0.010 U
Selenium	µg/L	<50 U	<50 U	<50 U	<50 U
Silver	µg/L	<30 U	<30 U	<30 U	<30 U
General Chemistry					
pH	su	7.61	6.63	7.61	7.62

Note: Bold type indicates the sample result is above the contract required quantitation limit.

Key:

µg/L = micrograms per liter.

su = standard unit

U = The analyte was not detected at or above the associated value.

Attachment C

Soil and Water Sample Analytical Report

The results set forth herein are provided by SGS North America Inc.

Technical Report for

Weston Solutions, Inc.

Evening Star & Compromise Mine RS

0001/1807-03

SGS Job Number: DA7547

Sampling Date: 07/27/18



Report to:

Weston Solutions, Inc.
1435 Garrison Street Suite 100
Lakewood, CO 80215
michael.worden@westonsolutions.com; molly.patterson@westonsolutions.com
ATTN: Michael Worden

Total number of pages in report: 121



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Elizabeth Sutcliffe 303-425-6021

Certifications: CO (CO00049), ID (CO00049), NE (NE-OS-06-04), ND (R-027), NJ (CO007), OK (D9942)
UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

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Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: DA7547

Evening Star & Compromise Mine RS
 Project No: 0001/1807-03

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA7547-1	07/27/18	08:00 MW	07/28/18	SO	Soil	ES-01-SS-00
DA7547-1A	07/27/18	08:00 MW	07/28/18	SO	Soil	ES-01-SS-00
DA7547-2	07/27/18	08:10 MW	07/28/18	SO	Soil	ES-01-SS-12
DA7547-2A	07/27/18	08:10 MW	07/28/18	SO	Soil	ES-01-SS-12
DA7547-3	07/27/18	09:00 MW	07/28/18	SO	Soil	ES-02-SS-12
DA7547-3A	07/27/18	09:00 MW	07/28/18	SO	Soil	ES-02-SS-12
DA7547-4	07/27/18	09:10 MW	07/28/18	SO	Soil	ES-03-SS-12
DA7547-4A	07/27/18	09:10 MW	07/28/18	SO	Soil	ES-03-SS-12
DA7547-5	07/27/18	09:20 MW	07/28/18	SO	Soil	ES-04-SS-06
DA7547-5A	07/27/18	09:20 MW	07/28/18	SO	Soil	ES-04-SS-06
DA7547-6	07/27/18	09:35 MW	07/28/18	SO	Soil	ES-05-SS-00
DA7547-6A	07/27/18	09:35 MW	07/28/18	SO	Soil	ES-05-SS-00
DA7547-7	07/27/18	10:00 MW	07/28/18	SO	Soil	ES-06-SS-00

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Summary

(continued)

Weston Solutions, Inc.

Job No: DA7547

Evening Star & Compromise Mine RS

Project No: 0001/1807-03

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA7547-7A	07/27/18	10:00 MW	07/28/18	SO	Soil	ES-06-SS-00
DA7547-8	07/27/18	11:25 MW	07/28/18	AQ	Water	CM-01-WT-00
DA7547-8F	07/27/18	11:25 MW	07/28/18	AQ	Water Filtered	CM-01-WT-00
DA7547-9	07/27/18	11:30 MW	07/28/18	AQ	Water	CM-02-WT
DA7547-9F	07/27/18	11:30 MW	07/28/18	AQ	Water Filtered	CM-02-WT
DA7547-10	07/27/18	11:35 MW	07/28/18	AQ	Water	CM-03-WT
DA7547-10F	07/27/18	11:35 MW	07/28/18	AQ	Water Filtered	CM-03-WT
DA7547-11	07/27/18	11:35 MW	07/28/18	AQ	Water	CM-04-WT
DA7547-11F	07/27/18	11:35 MW	07/28/18	AQ	Water Filtered	CM-04-WT
DA7547-12	07/27/18	11:45 MW	07/28/18	SO	Soil	CM-05-SS-00
DA7547-12A	07/27/18	11:45 MW	07/28/18	SO	Soil	CM-05-SS-00
DA7547-13	07/27/18	11:55 MW	07/28/18	SO	Soil	CM-06-SS-00
DA7547-13A	07/27/18	11:55 MW	07/28/18	SO	Soil	CM-06-SS-00

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Summary

(continued)

Weston Solutions, Inc.

Job No: DA7547

Evening Star & Compromise Mine RS

Project No: 0001/1807-03

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
DA7547-14	07/27/18	11:45 MW	07/28/18	SO	Soil	CM-07-SS-00
DA7547-14A	07/27/18	11:45 MW	07/28/18	SO	Soil	CM-07-SS-00
DA7547-15	07/27/18	10:35 MW	07/28/18	SO	Soil	ES-07-SS-06
DA7547-15A	07/27/18	10:35 MW	07/28/18	SO	Soil	ES-07-SS-06

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Weston Solutions, Inc.

Job No DA7547

Site: Evening Star & Compromise Mine RS

Report Date 8/14/2018 2:44:07 PM

On 07/28/2018, 15 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA7547 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method EPA 200.7

Matrix: AQ

Batch ID: MP25703

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-8MS, DA7547-8MSD were used as the QC samples for the metals analysis.

Metals Analysis By Method SW846 6010C

Matrix: AQ

Batch ID: MP25712

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-8FMS, DA7547-8FMSD, DA7547-8FSDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Cadmium, Chromium, Silver, Barium are outside control limits for sample MP25712-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP25712-SD1 for Barium: Serial dilution indicates possible matrix interference.

Matrix: LEACHATE

Batch ID: MP25780

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-13AMS, DA7547-13AMSD, DA7547-13ASDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Chromium, Silver are outside control limits for sample MP25780-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix: LEACHATE

Batch ID: MP25782

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-1AMS, DA7547-1AMSD, DA7547-1ASDL were used as the QC samples for the metals analysis.
- The blank spike (BS) recovery(s) of Selenium are outside control limits. All sample results < RL
- The matrix spike (MS) recovery(s) of Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Chromium, Selenium, Silver, Lead are outside control limits for sample MP25782-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP25782-SD1 for Lead: Serial dilution indicates possible matrix interference.

Matrix: SO

Batch ID: MP25701

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-1MS, DA7547-1MSD, DA7547-1SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Silver are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Arsenic, Barium, Cadmium, Silver are outside control limits. High RPD due to possible sample matrix or nonhomogeneity.
- The matrix spike (MS) recovery(s) of Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Arsenic, Lead, Barium, Cadmium, Silver are outside control limits for sample MP25701-S2. High RPD due to possible sample matrix or nonhomogeneity.
- The serial dilution RPD(s) for Arsenic, Chromium, Cadmium, Barium, Silver are outside control limits for sample MP25701-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP25701-SD1 for Barium and Silver: Serial dilution indicates possible matrix interference.
- DA7547-7 for Chromium and Selenium: Elevated detection limit due to dilution required for possible matrix interference.
- DA7547-1 for Chromium: Elevated detection limit due to dilution required for possible matrix interference.
- DA7547-6 for Selenium: Elevated detection limit due to dilution required for possible matrix interference.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP25719

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-8MS, DA7547-8MSD were used as the QC samples for the metals analysis.

Matrix: LEACHATE **Batch ID:** MP25781

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-13AMS, DA7547-13AMSD were used as the QC samples for the metals analysis.

Matrix: LEACHATE **Batch ID:** MP25783

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-2AMS, DA7547-2AMSD were used as the QC samples for the metals analysis.

Metals Analysis By Method SW846 7471B

Matrix: SO **Batch ID:** MP25722

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA7547-1MS, DA7547-1MSD were used as the QC samples for the metals analysis.

General Chemistry By Method SM2540G-2011 M

Matrix: SO **Batch ID:** GN43895

- Sample(s) DA7549-10DUP were used as the QC samples for the Solids, Percent analysis.

Matrix: SO **Batch ID:** GN43945

- Sample(s) DA7701-8DUP were used as the QC samples for the Solids, Percent analysis.

General Chemistry By Method SM4500HB+-2011/9040C

Matrix: AQ **Batch ID:** GN43864

- Sample(s) DA7323-1DUP were used as the QC samples for the pH analysis.
- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: DA7547-10, DA7547-11, DA7547-8, DA7547-9 Analysis performed past recommended hold time.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA7547
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/27/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA7547-1	ES-01-SS-00					
Arsenic		112	54		mg/kg	SW846 6010C
Barium		331	1.1		mg/kg	SW846 6010C
Cadmium		8.2	1.1		mg/kg	SW846 6010C
Lead		9280	110		mg/kg	SW846 6010C
Mercury		0.20	0.091		mg/kg	SW846 7471B
Selenium		18.3	5.4		mg/kg	SW846 6010C
Silver		17.5	3.3		mg/kg	SW846 6010C
DA7547-1A	ES-01-SS-00					
Cadmium		0.070	0.010		mg/l	SW846 6010C
Lead		49.8	0.050		mg/l	SW846 6010C
DA7547-2	ES-01-SS-12					
Arsenic		76.4	2.8		mg/kg	SW846 6010C
Barium		753	1.1		mg/kg	SW846 6010C
Cadmium		8.8	1.1		mg/kg	SW846 6010C
Chromium		16.2	1.1		mg/kg	SW846 6010C
Lead		8920	5.7		mg/kg	SW846 6010C
Mercury		0.18	0.094		mg/kg	SW846 7471B
Selenium		13.2	5.7		mg/kg	SW846 6010C
Silver		32.4	3.4		mg/kg	SW846 6010C
DA7547-2A	ES-01-SS-12					
Cadmium		0.11	0.010		mg/l	SW846 6010C
Lead		34.6	0.050		mg/l	SW846 6010C
DA7547-3	ES-02-SS-12					
Arsenic		120	57		mg/kg	SW846 6010C
Barium		658	1.1		mg/kg	SW846 6010C
Cadmium		22.6	1.1		mg/kg	SW846 6010C
Chromium		27.8	23		mg/kg	SW846 6010C
Lead		17200	110		mg/kg	SW846 6010C
Mercury		0.36	0.093		mg/kg	SW846 7471B
Selenium		16.8	5.7		mg/kg	SW846 6010C
Silver		95.9	3.4		mg/kg	SW846 6010C
DA7547-3A	ES-02-SS-12					
Barium		1.3	1.0		mg/l	SW846 6010C

Summary of Hits

Job Number: DA7547
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/27/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Cadmium		0.25	0.010		mg/l	SW846 6010C
Lead		24.6	0.050		mg/l	SW846 6010C
DA7547-4	ES-03-SS-12					
Arsenic		20.3	3.1		mg/kg	SW846 6010C
Barium		549	1.2		mg/kg	SW846 6010C
Cadmium		2.3	1.2		mg/kg	SW846 6010C
Chromium		18.5	1.2		mg/kg	SW846 6010C
Lead		566	6.1		mg/kg	SW846 6010C
Silver		5.5	3.7		mg/kg	SW846 6010C
DA7547-4A	ES-03-SS-12					
Arsenic		0.034	0.025		mg/l	SW846 6010C
DA7547-5	ES-04-SS-06					
Arsenic		25.2	2.8		mg/kg	SW846 6010C
Barium		852	1.1		mg/kg	SW846 6010C
Cadmium		4.1	1.1		mg/kg	SW846 6010C
Chromium		29.3	1.1		mg/kg	SW846 6010C
Lead		1050	5.7		mg/kg	SW846 6010C
Selenium		6.5	5.7		mg/kg	SW846 6010C
Silver		8.6	3.4		mg/kg	SW846 6010C
DA7547-5A	ES-04-SS-06					
Cadmium		0.037	0.010		mg/l	SW846 6010C
Lead		0.61	0.50		mg/l	SW846 6010C
DA7547-6	ES-05-SS-00					
Arsenic		515	53		mg/kg	SW846 6010C
Barium		245	1.1		mg/kg	SW846 6010C
Cadmium		163	1.1		mg/kg	SW846 6010C
Chromium		24.0	21		mg/kg	SW846 6010C
Lead		39700	110		mg/kg	SW846 6010C
Mercury		0.96	0.40		mg/kg	SW846 7471B
Silver		262	63		mg/kg	SW846 6010C
DA7547-6A	ES-05-SS-00					
Cadmium		0.52	0.010		mg/l	SW846 6010C
Chromium		0.018	0.010		mg/l	SW846 6010C

Summary of Hits

Job Number: DA7547
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/27/18



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
		Lead	34.7	0.050	mg/l	SW846 6010C
DA7547-7	ES-06-SS-00					
		Arsenic	1490	59	mg/kg	SW846 6010C
		Barium	133	1.2	mg/kg	SW846 6010C
		Cadmium	352	1.2	mg/kg	SW846 6010C
		Lead	148000	120	mg/kg	SW846 6010C
		Mercury	3.1	0.97	mg/kg	SW846 7471B
		Silver	732	71	mg/kg	SW846 6010C
DA7547-7A	ES-06-SS-00					
		Cadmium	1.4	0.050	mg/l	SW846 6010C
		Lead	9.4	0.050	mg/l	SW846 6010C
		Selenium	0.15	0.050	mg/l	SW846 6010C
DA7547-8	CM-01-WT-00					
		Barium	14.7	10	ug/l	EPA 200.7
		pH ^a	7.61		su	SM4500HB+ -2011/9040C
DA7547-8F	CM-01-WT-00					
		Barium	15.0	10	ug/l	SW846 6010C
DA7547-9	CM-02-WT					
		Barium	12.8	10	ug/l	EPA 200.7
		pH ^a	6.63		su	SM4500HB+ -2011/9040C
DA7547-9F	CM-02-WT					
		Barium	12.3	10	ug/l	SW846 6010C
DA7547-10	CM-03-WT					
		Barium	52.7	10	ug/l	EPA 200.7
		pH ^a	7.61		su	SM4500HB+ -2011/9040C
DA7547-10F	CM-03-WT					
		Barium	52.1	10	ug/l	SW846 6010C

Summary of Hits

Job Number: DA7547
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/27/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA7547-11	CM-04-WT					
Barium		52.6	10		ug/l	EPA 200.7
pH ^a		7.62			su	SM4500HB+ -2011/9040C
DA7547-11F	CM-04-WT					
Barium		53.2	10		ug/l	SW846 6010C
DA7547-12	CM-05-SS-00					
Arsenic		67.1	3.4		mg/kg	SW846 6010C
Barium		1480	1.3		mg/kg	SW846 6010C
Cadmium		11.5	1.3		mg/kg	SW846 6010C
Chromium		18.6	1.3		mg/kg	SW846 6010C
Lead		1660	6.7		mg/kg	SW846 6010C
Mercury		0.21	0.11		mg/kg	SW846 7471B
Selenium		13.2	6.7		mg/kg	SW846 6010C
Silver		26.6	4.0		mg/kg	SW846 6010C
DA7547-12A	CM-05-SS-00					
Barium		1.0	1.0		mg/l	SW846 6010C
Cadmium		0.044	0.010		mg/l	SW846 6010C
Lead		0.11	0.050		mg/l	SW846 6010C
DA7547-13	CM-06-SS-00					
Arsenic		141	9.4		mg/kg	SW846 6010C
Barium		547	3.7		mg/kg	SW846 6010C
Cadmium		118	3.7		mg/kg	SW846 6010C
Chromium		9.2	3.7		mg/kg	SW846 6010C
Lead		9400	19		mg/kg	SW846 6010C
Mercury		0.54	0.30		mg/kg	SW846 7471B
Selenium		147	19		mg/kg	SW846 6010C
DA7547-13A	CM-06-SS-00					
Barium		1.1	1.0		mg/l	SW846 6010C
Cadmium		0.14	0.010		mg/l	SW846 6010C
Lead		8.6	0.050		mg/l	SW846 6010C
DA7547-14	CM-07-SS-00					
Arsenic		68.3	3.1		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA7547
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/27/18



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Barium		1440	1.2		mg/kg	SW846 6010C
Cadmium		11.3	1.2		mg/kg	SW846 6010C
Chromium		18.3	1.2		mg/kg	SW846 6010C
Lead		1720	6.2		mg/kg	SW846 6010C
Mercury		0.29	0.11		mg/kg	SW846 7471B
Selenium		15.7	6.2		mg/kg	SW846 6010C
Silver		20.1	3.7		mg/kg	SW846 6010C
DA7547-14A CM-07-SS-00						
Barium		1.1	1.0		mg/l	SW846 6010C
Cadmium		0.036	0.010		mg/l	SW846 6010C
Lead		0.063	0.050		mg/l	SW846 6010C
DA7547-15 ES-07-SS-06						
Arsenic		48.1	2.7		mg/kg	SW846 6010C
Barium		535	1.1		mg/kg	SW846 6010C
Cadmium		15.6	1.1		mg/kg	SW846 6010C
Chromium		33.2	1.1		mg/kg	SW846 6010C
Lead		8920	5.4		mg/kg	SW846 6010C
Mercury		0.22	0.094		mg/kg	SW846 7471B
Selenium		25.1	5.4		mg/kg	SW846 6010C
Silver		62.7	3.2		mg/kg	SW846 6010C
DA7547-15A ES-07-SS-06						
Cadmium		0.097	0.010		mg/l	SW846 6010C
Lead		6.8	0.050		mg/l	SW846 6010C

(a) Analysis performed past recommended hold time.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: ES-01-SS-00 Lab Sample ID: DA7547-1 Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 86.8
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	112	54	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	331	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	8.2	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 22	22	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Lead	9280	110	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.20	0.091	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	18.3	5.4	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	17.5	3.3	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.1
4

Report of Analysis

Client Sample ID: ES-01-SS-00 Lab Sample ID: DA7547-1A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 86.8
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	< 1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.070	D006	1.0	0.010	mg/l	1	08/06/18	08/06/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/06/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Lead	49.8	D008	5.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/06/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.2
4

Report of Analysis

Client Sample ID: ES-01-SS-12 Lab Sample ID: DA7547-2 Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 84.7
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	76.4	2.8	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	753	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	8.8	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	16.2	1.1	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Lead	8920	5.7	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.18	0.094	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	13.2	5.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	32.4	3.4	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: ES-01-SS-12 Lab Sample ID: DA7547-2A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 84.7
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	< 1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.11	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Lead	34.6	D008	5.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
 MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.4
4

Report of Analysis

Client Sample ID: ES-02-SS-12 Lab Sample ID: DA7547-3 Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 87.0
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	120	57	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	658	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	22.6	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	27.8	23	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Lead	17200	110	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.36	0.093	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	16.8	5.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	95.9	3.4	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.5
4

Report of Analysis

Client Sample ID: ES-02-SS-12 Lab Sample ID: DA7547-3A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 87.0
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	1.3	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.25	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Lead	24.6	D008	5.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
 MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.6
4

Report of Analysis

Client Sample ID: ES-03-SS-12	Date Sampled: 07/27/18
Lab Sample ID: DA7547-4	Date Received: 07/28/18
Matrix: SO - Soil	Percent Solids: 81.8
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	20.3	3.1	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	549	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	2.3	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	18.5	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	566	6.1	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	< 0.099	0.099	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	< 6.1	6.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	5.5	3.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.7
4

Report of Analysis

Client Sample ID: ES-03-SS-12 Lab Sample ID: DA7547-4A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 81.8
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	0.034	D004	5.0	0.025	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	< 1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	< 0.010	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Lead	< 0.050	D008	5.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.8
4

Report of Analysis

Client Sample ID: ES-04-SS-06 Lab Sample ID: DA7547-5 Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 87.6
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	25.2	2.8	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	852	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	4.1	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	29.3	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	1050	5.7	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	< 0.088	0.088	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	6.5	5.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	8.6	3.4	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.9
4

Report of Analysis

Client Sample ID: ES-04-SS-06 Lab Sample ID: DA7547-5A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 87.6
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4.10
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.25	D004	5.0	0.25	mg/l	10	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	< 10	D005	100	10	mg/l	10	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.037	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Lead	0.61	D008	5.0	0.50	mg/l	10	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.50	D010	1.0	0.50	mg/l	10	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: ES-05-SS-00	Date Sampled: 07/27/18
Lab Sample ID: DA7547-6	Date Received: 07/28/18
Matrix: SO - Soil	Percent Solids: 94.9
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	515	53	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	245	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	163	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	24.0	21	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Lead	39700	110	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.96	0.40	mg/kg	5	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium ^a	< 110	110	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Silver	262	63	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.11
4

Report of Analysis

Client Sample ID: ES-05-SS-00 Lab Sample ID: DA7547-6A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 94.9
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4.12
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Barium	< 1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.52	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴
Chromium	0.018	D007	5.0	0.010	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Lead	34.7	D008	5.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Prep QC Batch: MP25782
- (5) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: ES-06-SS-00 Lab Sample ID: DA7547-7 Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 84.7
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1490	59	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	133	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	352	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 24	24	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Lead	148000	120	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	3.1	0.97	mg/kg	10	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium ^a	< 120	120	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Silver	732	71	mg/kg	20	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.13
4

Report of Analysis

Client Sample ID: ES-06-SS-00 Lab Sample ID: DA7547-7A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 84.7
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 2.5	D004	5.0	2.5	mg/l	100	08/06/18	08/13/18 JR	SW846 6010C ⁵	SW846 3010A ⁶
Barium	< 1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁶
Cadmium	1.4	D006	1.0	0.050	mg/l	5	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁶
Chromium	< 0.050	D007	5.0	0.050	mg/l	5	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁶
Lead	9.4	D008	5.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁶
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁷
Selenium	0.15	D010	1.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁶
Silver	< 0.15	D011	5.0	0.15	mg/l	5	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁶

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Instrument QC Batch: MA10278
- (5) Instrument QC Batch: MA10294
- (6) Prep QC Batch: MP25782
- (7) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.14
4

Report of Analysis

Client Sample ID: CM-01-WT-00 Lab Sample ID: DA7547-8 Matrix: AQ - Water Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Barium	14.7	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Cadmium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Chromium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Lead	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Silver	< 30	30	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³

- (1) Instrument QC Batch: MA10239
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25703
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.15
4

Report of Analysis

Client Sample ID: CM-01-WT-00	Date Sampled: 07/27/18
Lab Sample ID: DA7547-8	Date Received: 07/28/18
Matrix: AQ - Water	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

4.15
4

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH ^a	7.61		su	1	07/30/18 10:55	MA	SM4500HB+ -2011/9040C

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: CM-01-WT-00 Lab Sample ID: DA7547-8F Matrix: AQ - Water Filtered Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Barium	15.0	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA10245
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25712
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.16
4

Report of Analysis

Client Sample ID: CM-02-WT Lab Sample ID: DA7547-9 Matrix: AQ - Water Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Barium	12.8	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Cadmium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Chromium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Lead	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Silver	< 30	30	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³

- (1) Instrument QC Batch: MA10239
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25703
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.17
4

Report of Analysis

Client Sample ID: CM-02-WT	Date Sampled: 07/27/18
Lab Sample ID: DA7547-9	Date Received: 07/28/18
Matrix: AQ - Water	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH ^a	6.63		su	1	07/30/18 10:55	MA	SM4500HB+ -2011/9040C

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

4.17
4

Report of Analysis

Client Sample ID: CM-02-WT	Date Sampled: 07/27/18
Lab Sample ID: DA7547-9F	Date Received: 07/28/18
Matrix: AQ - Water Filtered	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Barium	12.3	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA10245
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25712
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.18
4

Report of Analysis

Client Sample ID: CM-03-WT Lab Sample ID: DA7547-10 Matrix: AQ - Water Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Barium	52.7	10	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Cadmium	< 10	10	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Chromium	< 10	10	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Lead	< 50	50	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18 08/01/18	JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³
Silver	< 30	30	ug/l	1	07/30/18 07/31/18	JM	EPA 200.7 ¹	EPA 200.7 ³

- (1) Instrument QC Batch: MA10239
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25703
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.19
4

Report of Analysis

Client Sample ID: CM-03-WT	Date Sampled: 07/27/18
Lab Sample ID: DA7547-10	Date Received: 07/28/18
Matrix: AQ - Water	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

4.19
4

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH ^a	7.61		su	1	07/30/18 10:55	MA	SM4500HB+ -2011/9040C

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: CM-03-WT Lab Sample ID: DA7547-10F Matrix: AQ - Water Filtered Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Barium	52.1	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA10245
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25712
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.20
4

Report of Analysis

Client Sample ID: CM-04-WT	Date Sampled: 07/27/18
Lab Sample ID: DA7547-11	Date Received: 07/28/18
Matrix: AQ - Water	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Barium	52.6	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Cadmium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Chromium	< 10	10	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Lead	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³
Silver	< 30	30	ug/l	1	07/30/18	07/31/18 JM	EPA 200.7 ¹	EPA 200.7 ³

- (1) Instrument QC Batch: MA10239
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25703
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.21
4

Report of Analysis

Client Sample ID: CM-04-WT	Date Sampled: 07/27/18
Lab Sample ID: DA7547-11	Date Received: 07/28/18
Matrix: AQ - Water	Percent Solids: n/a
Project: Evening Star & Compromise Mine RS	

4.21
4

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH ^a	7.62		su	1	07/30/18 10:55	MA	SM4500HB+ -2011/9040C

(a) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: CM-04-WT Lab Sample ID: DA7547-11F Matrix: AQ - Water Filtered Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: n/a
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Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Barium	53.2	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Mercury	< 0.10	0.10	ug/l	1	08/01/18	08/01/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 50	50	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	08/01/18	08/01/18 JM	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA10245
- (2) Instrument QC Batch: MA10248
- (3) Prep QC Batch: MP25712
- (4) Prep QC Batch: MP25719

RL = Reporting Limit

4.22
4

Report of Analysis

Client Sample ID: CM-05-SS-00		Date Sampled: 07/27/18
Lab Sample ID: DA7547-12		Date Received: 07/28/18
Matrix: SO - Soil		Percent Solids: 73.7
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analized By	Method	Prep Method
Arsenic	67.1	3.4	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	1480	1.3	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	11.5	1.3	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	18.6	1.3	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	1660	6.7	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.21	0.11	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	13.2	6.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	26.6	4.0	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.23
4

Report of Analysis

Client Sample ID: CM-05-SS-00 Lab Sample ID: DA7547-12A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 73.7
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4.24
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Barium	1.0	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁵
Cadmium	0.044	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Lead	0.11	D008	5.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁶
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Instrument QC Batch: MA10278
- (5) Prep QC Batch: MP25782
- (6) Prep QC Batch: MP25783

RL = Reporting Limit
 MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: CM-06-SS-00	Date Sampled: 07/27/18
Lab Sample ID: DA7547-13	Date Received: 07/28/18
Matrix: SO - Soil	Percent Solids: 25.4
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	141	9.4	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	547	3.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	118	3.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	9.2	3.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	9400	19	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.54	0.30	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	147	19	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	< 11	11	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.25
4

Report of Analysis

Client Sample ID: CM-06-SS-00 Lab Sample ID: DA7547-13A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 25.4
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Barium	1.1	D005	100	1.0	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Cadmium	0.14	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Lead	8.6	D008	5.0	0.050	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Prep QC Batch: MP25780
- (4) Prep QC Batch: MP25781

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.26
4

Report of Analysis

Client Sample ID: CM-07-SS-00		Date Sampled: 07/27/18
Lab Sample ID: DA7547-14		Date Received: 07/28/18
Matrix: SO - Soil		Percent Solids: 79.3
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	68.3	3.1	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	1440	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	11.3	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	18.3	1.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	1720	6.2	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.29	0.11	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	15.7	6.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	20.1	3.7	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.27
4

Report of Analysis

Client Sample ID: CM-07-SS-00 Lab Sample ID: DA7547-14A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 79.3
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4.28
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Barium	1.1	D005	100	1.0	mg/l	1	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁵
Cadmium	0.036	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Lead	0.063	D008	5.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁶
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Instrument QC Batch: MA10278
- (5) Prep QC Batch: MP25782
- (6) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: ES-07-SS-06	Date Sampled: 07/27/18
Lab Sample ID: DA7547-15	Date Received: 07/28/18
Matrix: SO - Soil	Percent Solids: 87.6
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	48.1	2.7	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Barium	535	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	15.6	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium	33.2	1.1	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	8920	5.4	mg/kg	1	07/30/18	08/03/18 JR	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.22	0.094	mg/kg	1	07/31/18	07/31/18 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	25.1	5.4	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	62.7	3.2	mg/kg	1	07/30/18	08/01/18 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA10240
- (2) Instrument QC Batch: MA10247
- (3) Instrument QC Batch: MA10252
- (4) Prep QC Batch: MP25701
- (5) Prep QC Batch: MP25722

RL = Reporting Limit

4.29
4

Report of Analysis

Client Sample ID: ES-07-SS-06 Lab Sample ID: DA7547-15A Matrix: SO - Soil Project: Evening Star & Compromise Mine RS	Date Sampled: 07/27/18 Date Received: 07/28/18 Percent Solids: 87.6
---	--

4.30
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Barium	< 10	D005	100	10	mg/l	10	08/06/18	08/08/18 JR	SW846 6010C ³	SW846 3010A ⁵
Cadmium	0.097	D006	1.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵
Lead	6.8	D008	5.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	08/06/18	08/06/18 JM	SW846 7470A ²	SW846 7470A ⁶
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	08/06/18	08/09/18 JR	SW846 6010C ⁴	SW846 3010A ⁵
Silver	< 0.030	D011	5.0	0.030	mg/l	1	08/06/18	08/07/18 JR	SW846 6010C ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA10262
- (2) Instrument QC Batch: MA10265
- (3) Instrument QC Batch: MA10277
- (4) Instrument QC Batch: MA10278
- (5) Prep QC Batch: MP25782
- (6) Prep QC Batch: MP25783

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
 4036 Youngfield Street, Wheat Ridge, CO 80033
 TEL: 303-425-6021 FAX: 303-425-6854
 www.sgs.com/ehsusa

Bottle Order Control #	FED-EX Tracking #
SGS Quote # WB7201818	SGS Job # DA7547

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)													Matrix Codes		
Company: <i>Weston Solutions</i>		Project Name: <i>Evening Star & Compromise Mine RS</i>		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">#MB</div> <div style="margin-bottom: 10px;">TCLP M</div> <div style="margin-bottom: 10px;">PH</div> <div style="margin-bottom: 10px;">#NO</div> <div style="margin-bottom: 10px;">Diss Metals</div> </div>													Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank		
Street: <i>1435 Garrison St.</i>		Street:																	
City, State: <i>Lakewood CO</i>		City, State:																	
Project Contact: <i>Michael Worden</i>		Project #: <i>0001/1807-03</i>																	
Phone: <i>557 265 7529</i>		Client Purchase Order #:																	
Email: <i>michael.worden@weston solutions.com</i>		Street Address:																	
Sampler(s) Name(s):				Number of preserved Bottles													LAB USE ONLY		
Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	NONE	HCl	NaOH	HNO3	H2SO4	D/W Water	MEDIA	ENCORE	Na2S2O5	Na2S2O8				
<i>ES-01-SS-00</i>	<i>7/27</i>	<i>0800</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c1</i>
<i>ES-01-SS-12</i>	<i>7/27</i>	<i>0910</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c2</i>
<i>ES-02-SS-12</i>		<i>0900</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c3</i>
<i>ES-03-SS-12</i>		<i>0910</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c4</i>
<i>ES-04-SS-06</i>		<i>0920</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c5</i>
<i>ES-05-SS-00</i>		<i>0935</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c6</i>
<i>ES-06-SS-00</i>		<i>1000</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>c7</i>
<i>CH-01-WT-00</i>		<i>1125</i>		<i>WT</i>	<i>3</i>	<i>2</i>			<i>1</i>										<i>a</i>
<i>CH-02-WT</i>		<i>1130</i>		<i>WT</i>	<i>3</i>	<i>2</i>			<i>1</i>										<i>09</i>
<i>CH-03-WT</i>		<i>1135</i>		<i>WT</i>	<i>3</i>	<i>2</i>			<i>1</i>										<i>10</i>
<i>CH-04-WT</i>		<i>1135</i>		<i>WT</i>	<i>3</i>	<i>2</i>			<i>1</i>										<i>11</i>
<i>CH-05-SS-00</i>	<i>7/27</i>	<i>1145</i>		<i>SO</i>	<i>2</i>	<i>2</i>													<i>12</i>

Turnaround Time (Business days)	Data Deliverable Information	Comments / Special Instructions
<input checked="" type="checkbox"/> Standard 10 Business Days <input type="checkbox"/> 5 Business Days RUSH <input type="checkbox"/> 3 Business Days RUSH <input type="checkbox"/> 2 Business Days RUSH <input type="checkbox"/> 1 Business Day EMERGENCY	<input type="checkbox"/> Commercial "A" (Level 1, Results Only) <input type="checkbox"/> Commercial "B" (Level 2, Results + QC Summary) <input type="checkbox"/> COMMBN (Results/QC/Narrative) <input type="checkbox"/> COMMBN+ (Results/QC/Narrative (+ chromatograms)) <input type="checkbox"/> REDT2 <input type="checkbox"/> FULT1 <input type="checkbox"/> EDD Format	Soil Field screening high for Metals Dissolved Metals Lab Filter needed

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished By: <i>1 [Signature]</i>	Date/Time: <i>7/27/18 1500</i>	Received By: <i>1 [Signature]</i>	Date/Time: <i>7/27-18 900</i>	Relinquished By: <i>2</i>	Date/Time: <i>2</i>	Received By: <i>2</i>	Date/Time: <i>2</i>
Relinquished by Sampler: <i>3</i>	Date/Time: <i>3</i>	Received By: <i>3</i>	Date/Time: <i>3</i>	Relinquished By: <i>4</i>	Date/Time: <i>4</i>	Received By: <i>4</i>	Date/Time: <i>4</i>

Custody Seal #	Intact <input checked="" type="checkbox"/> Not Intact <input type="checkbox"/> Absent <input type="checkbox"/>	Preserved where applicable <input checked="" type="checkbox"/>	Cooler Temp. °C: <i>2.5</i>	Therm. ID: <i>716</i>	On Ice <input checked="" type="checkbox"/>
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<http://www.sgs.com/en/terms-and-conditions>

5.1
5

DA7547: Chain of Custody

Page 1 of 3





CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehusa

Form containing client/reporting information, project information, requested analysis, matrix codes, and custody chain details. Includes handwritten entries for company (Weston Solutions), project name (Evening Star & Compromise Mine PS), and collection data.

5.1
5



SGS Accutest Sample Receipt Summary

Job Number: DA7547

Client: WESTON

Project: EVENING STAR

Date / Time Received: 7/28/2018 9:00:00 AM

Delivery Method: _____

Airbill #s: FX

Cooler Temps (Initial/Adjusted): #1: (2.5/2.5):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>Bar Therm;</u> | |
| 3. Cooler media: | <u>Ice (Bag)</u> | |
| 4. No. Coolers: | <u>1</u> | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

5.1
5

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/30/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.1	1.7		
Antimony	3.0	.21	.82		
Arsenic	2.5	.38	1	0.35	<2.5
Barium	1.0	.02	.16	0.38	<1.0
Beryllium	1.0	.09	.16		
Boron	5.0	.08	.29		
Cadmium	1.0	.02	.1	0.080	<1.0
Calcium	40	.24	9.6		
Chromium	1.0	.03	.19	0.19	<1.0
Cobalt	0.50	.05	.12		
Copper	1.0	.08	.48		
Iron	7.0	.15	.69		
Lead	5.0	.21	.6	2.1	<5.0
Lithium	0.50	.04	.07		
Magnesium	20	.68	3.9		
Manganese	0.50	.05	.07		
Molybdenum	1.0	.04	.36		
Nickel	3.0	.05	.24		
Phosphorus	10	1.5	4.3		
Potassium	200	8.4	6		
Selenium	5.0	.71	1	-0.29	<5.0
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05	0.33	<3.0
Sodium	40	.73	1.5		
Strontium	5.0	.001	.03		
Thallium	1.0	.18	.86		
Tin	5.0	1.2	1.2		
Titanium	1.0	.01	.27		
Uranium	5.0	.29	.44		
Vanadium	1.0	.04	.07		
Zinc	3.0	.04	.35		

Associated samples MP25701: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

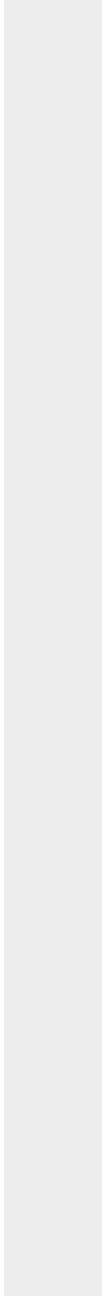
QC Batch ID: MP25701
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/30/18

Metal	RL	IDL	MDL	MB raw	final
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(*) Outside of QC limits
(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/30/18

Metal	DA7547-1 Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	112	252	115	121.5	75-125
Barium	418	618	230	124.6	75-125
Beryllium					
Boron					
Cadmium	8.2	73.3	57.6	113.0	75-125
Calcium	anr				
Chromium	15.7	87.3	57.6	124.3	75-125
Cobalt					
Copper					
Iron					
Lead	9280	16800	115	6527.4(a)	75-125
Lithium					
Magnesium	anr				
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	18.3	117	115	85.7	75-125
Silicon					
Silver	17.5	61.9	23	192.7N(b)	75-125
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP25701: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/30/18

Metal	DA7547-1 Original MS	SpikeLot ICPAL2	% Rec	QC Limits
-------	-------------------------	--------------------	-------	--------------

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

6.1.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/30/18

Metal	DA7547-1 Original	MSD	SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	112	323	108	196.0N(a)	24.7 (b)	20
Barium	418	356	215	11.6N(a)	53.8 (b)	20
Beryllium						
Boron						
Cadmium	8.2	127	53.8	220.7N(a)	53.6 (b)	20
Calcium	anr					
Chromium	15.7	71.7	53.8	104.0	19.6	20
Cobalt						
Copper						
Iron						
Lead	9280	7890	108	-1291.0c	72.2 (b)	20
Lithium						
Magnesium	anr					
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	18.3	106	108	81.5	9.9	20
Silicon						
Silver	17.5	77.6	21.5	279.1N(a)	22.5 (b)	20
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP25701: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/30/18

Metal	DA7547-1 Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
-------	--------------------------	---------------------------	------------	-------------

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) High RPD due to possible sample matrix or nonhomogeneity.
- (c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/30/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	99.0	100	99.0	80-120
Barium	185	200	92.5	80-120
Beryllium				
Boron				
Cadmium	45.1	50	90.2	80-120
Calcium	anr			
Chromium	45.9	50	91.8	80-120
Cobalt				
Copper				
Iron				
Lead	92.8	100	92.8	80-120
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	96.8	100	96.8	80-120
Silicon				
Silver	19.3	20	96.5	80-120
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25701: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

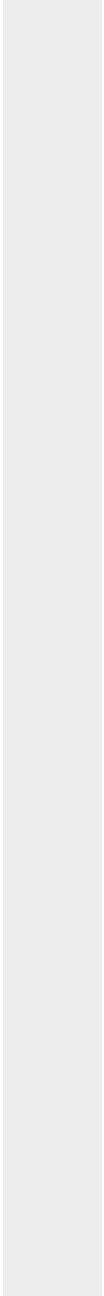
QC Batch ID: MP25701
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/30/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

(*) Outside of QC limits
(anr) Analyte not requested



6.1.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 07/30/18

Metal	DA7547-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	1030	2260	120.3 (a)	0-10
Barium	3040	3400	11.9* (b)	0-10
Beryllium				
Boron				
Cadmium	98.0	94.0	24.0 (a)	0-10
Calcium	anr			
Chromium	138	100	30.6 (a)	0-10
Cobalt				
Copper				
Iron				
Lead	69200	81900	4.1	0-10
Lithium				
Magnesium	anr			
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	168	161	4.6	0-10
Silicon				
Silver	161	197	22.1* (b)	0-10
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25701: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25701
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 07/30/18

	DA7547-1		QC
Metal	Original SDL 1:5	%DIF	Limits

- (*) Outside of QC limits
- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

6.1.4
6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25703
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/30/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	46	46		
Antimony	30	14	8.7		
Arsenic	25	22	12	1.2	<25
Barium	10	.3	.2	0.10	<10
Beryllium	10	1	1.6		
Boron	50	3.3	3.7		
Cadmium	10	1.9	.6	1.1	<10
Calcium	400	6.6	22		
Chromium	10	1.1	1	-0.20	<10
Cobalt	5.0	2.7	1.2		
Copper	10	4.6	2.9		
Iron	10	8.9	6.9		
Lead	50	13	9.1	-0.50	<50
Lithium	5.0	.6	1		
Magnesium	200	50	39		
Manganese	5.0	.5	.4		
Molybdenum	10	8.5	3.6		
Nickel	30	6.2	2.1		
Phosphorus	100	91	47		
Potassium	1000	84	61		
Selenium	50	30	15	-5.5	<50
Silicon	50	41	6.2		
Silver	30	.6	.9	0.80	<30
Sodium	400	13	14		
Strontium	5.0	.1	.3		
Thallium	10	17	9.1		
Tin	50	41	25		
Titanium	10	.5	2.5		
Uranium	50	3.9	4.4		
Vanadium	10	.9	.6		
Zinc	30	9	3.5		

Associated samples MP25703: DA7547-8, DA7547-9, DA7547-10, DA7547-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

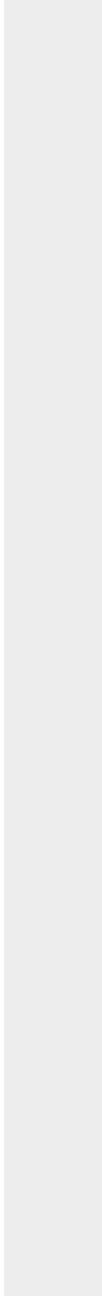
QC Batch ID: MP25703
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/30/18

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25703
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 07/30/18

Metal	DA7547-8 Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic	0.0	1030	1000	103.0	70-130
Barium	16.0	2060	2000	102.3	70-130
Beryllium					
Boron	anr				
Cadmium	2.8	486	500	96.7	70-130
Calcium					
Chromium	0.0	490	500	98.0	70-130
Cobalt					
Copper	anr				
Iron					
Lead	0.0	1020	1000	102.0	70-130
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Phosphorus					
Potassium	anr				
Selenium	0.0	944	1000	94.4	70-130
Silicon					
Silver	2.7	205	200	101.2	70-130
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP25703: DA7547-8, DA7547-9, DA7547-10, DA7547-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

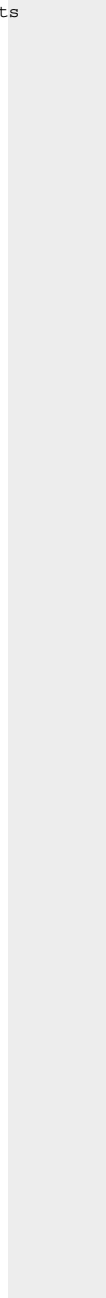
QC Batch ID: MP25703
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/30/18

Metal	DA7547-8 Original MS	SpikeLot ICPAL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



6.2.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25703
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 07/30/18

Metal	DA7547-8 Original	MSD	SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic	0.0	1020	1000	102.0	1.0	20
Barium	16.0	2040	2000	101.3	1.0	20
Beryllium						
Boron	anr					
Cadmium	2.8	485	500	96.5	0.2	20
Calcium						
Chromium	0.0	488	500	97.6	0.4	20
Cobalt						
Copper	anr					
Iron						
Lead	0.0	1000	1000	100.0	2.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Phosphorus						
Potassium	anr					
Selenium	0.0	942	1000	94.2	0.2	20
Silicon						
Silver	2.7	205	200	101.2	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP25703: DA7547-8, DA7547-9, DA7547-10, DA7547-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

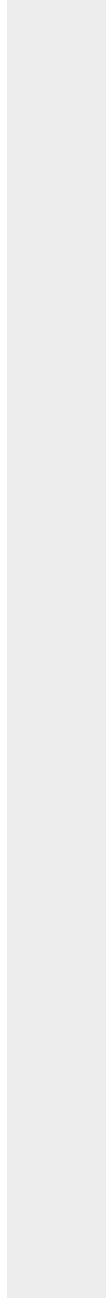
QC Batch ID: MP25703
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/30/18

Metal	DA7547-8 Original MSD	SpikeLot ICPALL2	% Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



6.2.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25703
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 07/30/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic	1020	1000	102.0	85-115
Barium	2040	2000	102.0	85-115
Beryllium				
Boron	anr			
Cadmium	492	500	98.4	85-115
Calcium				
Chromium	500	500	100.0	85-115
Cobalt				
Copper	anr			
Iron				
Lead	1050	1000	105.0	85-115
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium	anr			
Selenium	1010	1000	101.0	85-115
Silicon				
Silver	207	200	103.5	85-115
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP25703: DA7547-8, DA7547-9, DA7547-10, DA7547-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

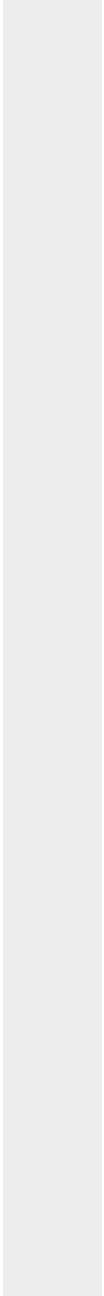
QC Batch ID: MP25703
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/30/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	11	13		
Antimony	30	2.1	8.7		
Arsenic	25	3.8	12	-1.3	<25
Barium	10	.2	1.3	0.0	<10
Beryllium	10	.9	1.6		
Boron	50	.8	3.6		
Cadmium	10	.2	1.9	0.50	<10
Calcium	400	2.4	10		
Chromium	10	.3	1.1	0.10	<10
Cobalt	5.0	.5	1.2		
Copper	10	.8	3.8		
Iron	70	1.5	6.9		
Lead	50	2.1	4.9	-0.40	<50
Lithium	5.0	.4	.7		
Magnesium	200	6.8	39		
Manganese	5.0	.5	.9		
Molybdenum	10	.4	3.6		
Nickel	30	.5	2.7		
Phosphorus	100	15	34		
Potassium	1000	99	71		
Selenium	50	7.1	11	-2.7	<50
Silicon	50	4.7	8.4		
Silver	30	.3	.61	-0.20	<30
Sodium	400	7.3	14		
Strontium	5.0	.01	.3		
Thallium	10	1.8	8		
Tin	50	12	12		
Titanium	10	.1	2.7		
Uranium	50	2.9	4.4		
Vanadium	10	.4	.6		
Zinc	30	.4	3.5		

Associated samples MP25712: DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

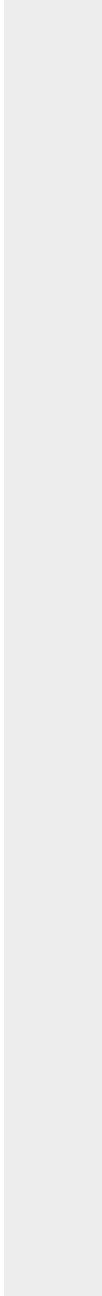
QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8F Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0	1030	1000	103.0	75-125
Barium	15.0	2050	2000	101.8	75-125
Beryllium					
Boron					
Cadmium	2.5	534	500	106.3	75-125
Calcium					
Chromium	1.6	508	500	101.3	75-125
Cobalt					
Copper					
Iron					
Lead	0.0	1010	1000	101.0	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	0.0	1060	1000	106.0	75-125
Silicon					
Silver	1.4	211	200	104.8	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP25712: DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

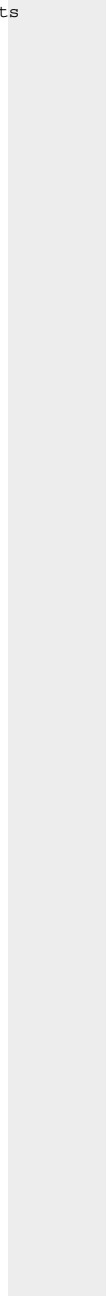
QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8F Original MS	SpikeLot ICPAL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



6.3.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8F Original MSD		SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	1010	1000	101.0	2.0	20
Barium	15.0	1990	2000	98.8	3.0	20
Beryllium						
Boron						
Cadmium	2.5	519	500	103.3	2.8	20
Calcium						
Chromium	1.6	496	500	98.9	2.4	20
Cobalt						
Copper						
Iron						
Lead	0.0	997	1000	99.7	1.3	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	0.0	1030	1000	103.0	2.9	20
Silicon						
Silver	1.4	205	200	101.8	2.9	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP25712: DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

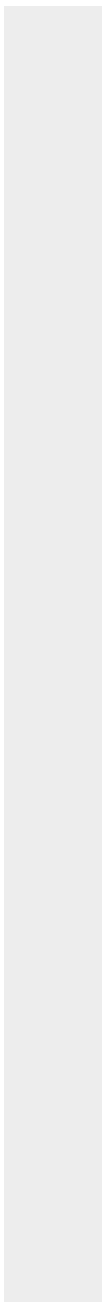
QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8F Original MSD	SpikeLot ICPALL2	% Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



6.3.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/01/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1030	1000	103.0	80-120
Barium	1940	2000	97.0	80-120
Beryllium				
Boron				
Cadmium	533	500	106.6	80-120
Calcium				
Chromium	521	500	104.2	80-120
Cobalt				
Copper				
Iron				
Lead	1040	1000	104.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	1040	1000	104.0	80-120
Silicon				
Silver	207	200	103.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25712: DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

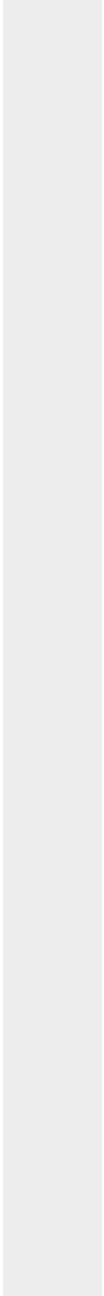
QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	22.0	NC	0-10
Barium	15.0	17.5	16.7*(a)	0-10
Beryllium				
Boron				
Cadmium	2.50	2.00	20.0 (b)	0-10
Calcium				
Chromium	1.60	0.00	100.0 (b)	0-10
Cobalt				
Copper				
Iron				
Lead	0.00	11.5	NC	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	1.40	2.00	42.9 (b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25712: DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25712
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/01/18

	DA7547-8F		QC
Metal	Original SDL 1:5	%DIF	Limits

- (anr) Analyte not requested
- (a) Serial dilution indicates possible matrix interference.
- (b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.3.4

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25719
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 08/01/18

Metal	RL	IDL	MDL	MB raw	final
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Mercury 0.10 .011 .024 0.0090 <0.10

Associated samples MP25719: DA7547-8, DA7547-9, DA7547-10, DA7547-11, DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.4.1

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25719
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8 Original MS	Spikelot HGWSR1	% Rec	QC Limits
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Mercury 0.0 3.2 3.13 102.4 75-125

Associated samples MP25719: DA7547-8, DA7547-9, DA7547-10, DA7547-11, DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25719
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 08/01/18

Metal	DA7547-8 Original	MSD	Spike lot	HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.2	3.13	102.4	0.0	20	

Associated samples MP25719: DA7547-8, DA7547-9, DA7547-10, DA7547-11, DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.4.2
 6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25719
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 08/01/18

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	3.2	3.13	102.4	80-120

Associated samples MP25719: DA7547-8, DA7547-9, DA7547-10, DA7547-11, DA7547-8F, DA7547-9F, DA7547-10F, DA7547-11F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.4.3
 6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25722
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/31/18

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.083	.00088	.0067	0.0013	<0.083

Associated samples MP25722: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.5.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25722
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 07/31/18

Metal	DA7547-1 Original MS	Spikelot HGWSR1	% Rec	QC Limits
-------	-------------------------	--------------------	-------	--------------

Mercury 0.20 0.59 0.349 111.7 75-125

Associated samples MP25722: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.52
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25722
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 07/31/18

Metal	DA7547-1 Original MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.20	0.59	0.366	106.6	0.0 20

Associated samples MP25722: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.52
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25722
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 07/31/18

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.36	0.333	108.0	80-120

Associated samples MP25722: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7, DA7547-12, DA7547-13, DA7547-14, DA7547-15

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.5.3
 6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.046	.013		
Antimony	0.030	.014	.0087		
Arsenic	0.025	.022	.012	0.0028	<0.025
Barium	1.0	.0003	.0013	0.011	<1.0
Beryllium	0.010	.001	.0016		
Boron	0.050	.0033	.0036		
Cadmium	0.010	.0019	.0019	0.00020	<0.010
Calcium	0.40	.0066	.01		
Chromium	0.010	.0011	.0011	0.00060	<0.010
Cobalt	0.0050	.0027	.0012		
Copper	0.010	.0046	.0038		
Iron	0.070	.0089	.0069		
Lead	0.050	.013	.0049	-0.0014	<0.050
Lithium	0.0050	.0006	.0007		
Magnesium	0.20	.05	.039		
Manganese	0.0050	.0005	.0009		
Molybdenum	2000	.0085	.0036		
Nickel	0.030	.0062	.0027		
Phosphorus	0.10	.091	.034		
Potassium	1.0	.084	.071		
Selenium	0.050	.03	.011	-0.00090	<0.050
Silicon	0.050	.041	.0084		
Silver	0.030	.0006	.00061	0.00080	<0.030
Sodium	0.40	.013	.014		
Strontium	0.050	.0001	.0003		
Thallium	0.010	.017	.008		
Tin	0.050	.041	.012		
Titanium	0.010	.0005	.0027		
Uranium	0.050	.0039	.0044		
Vanadium	0.010	.0009	.0006		
Zinc	0.030	.009	.0035		

Associated samples MP25780: DA7547-13A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

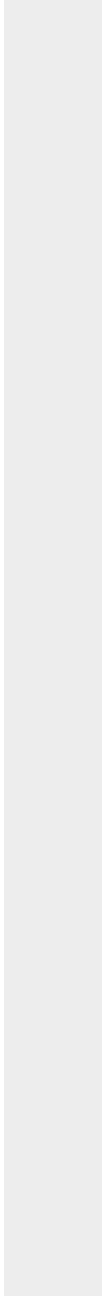
QC Batch ID: MP25780
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0	1.0	1.0	100.0	75-125
Barium	1.1	3.1	2.0	100.0	75-125
Beryllium					
Boron					
Cadmium	0.14	0.63	0.50	98.0	75-125
Calcium					
Chromium	0.0023	0.50	0.50	99.5	75-125
Cobalt					
Copper					
Iron					
Lead	8.6	9.3	1.0	70.0 (a)	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	0.0	1.0	1.0	100.0	75-125
Silicon					
Silver	0.0029	0.20	0.20	98.6	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP25780: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MS	SpikeLot ICPAL2	% Rec	QC Limits
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.6.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MSD		SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	0.99	1.0	99.0	1.0	20
Barium	1.1	3.0	2.0	95.0	3.3	20
Beryllium						
Boron						
Cadmium	0.14	0.63	0.50	98.0	0.0	20
Calcium						
Chromium	0.0023	0.49	0.50	97.5	2.0	20
Cobalt						
Copper						
Iron						
Lead	8.6	9.3	1.0	70.0 (a)	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	0.0	0.99	1.0	99.0	1.0	20
Silicon						
Silver	0.0029	0.19	0.20	93.6	5.1	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP25780: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

6.6.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1.1	1.0	110.0	80-120
Barium	2.1	2.0	105.0	80-120
Beryllium				
Boron				
Cadmium	0.53	0.50	106.0	80-120
Calcium				
Chromium	0.54	0.50	108.0	80-120
Cobalt				
Copper				
Iron				
Lead	1.1	1.0	110.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	1.1	1.0	110.0	80-120
Silicon				
Silver	0.20	0.20	100.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25780: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

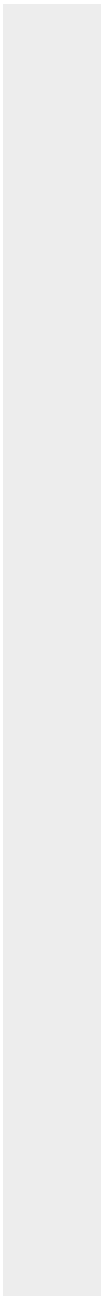
QC Batch ID: MP25780
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



6.6.3
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/06/18

Metal	DA7547-13A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	1070	1120	3.9	0-10
Beryllium				
Boron				
Cadmium	136	146	7.0	0-10
Calcium				
Chromium	2.30	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	8600	8900	3.5	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	2.90	6.50	124.1(a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25780: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25780
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/06/18

Metal	DA7547-13A	QC
	Original SDL 1:5 %DIF	Limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.6.4

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25781
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
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Mercury 0.00010 .000011 .000024 0.000015 <0.00010

Associated samples MP25781: DA7547-13A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.7.1

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25781
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MS	SpikeLot HGWSR1	% Rec	QC Limits
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Mercury 0.000013 0.0033 0.0031 105.2 75-125

Associated samples MP25781: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.7.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25781
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-13A Original MSD	SpikeLot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.000013 0.0033	0.0031	105.2	0.0	20

Associated samples MP25781: DA7547-13A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.7.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25781
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.0034	0.0031	108.8	80-120

Associated samples MP25781: DA7547-13A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.7.3

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.011	.013		
Antimony	0.030	.0021	.0087		
Arsenic	0.025	.0038	.012	0.0021	<0.025
Barium	1.0	.0002	.0013	0.0054	<1.0
Beryllium	0.010	.0009	.0016		
Boron	0.050	.0008	.0036		
Cadmium	0.010	.0002	.0019	0.00030	<0.010
Calcium	0.40	.0024	.01		
Chromium	0.010	.0003	.0011	0.00030	<0.010
Cobalt	0.0050	.0005	.0012		
Copper	0.010	.0008	.0038		
Iron	0.070	.0015	.0069		
Lead	0.050	.0021	.0049	-0.00050	<0.050
Lithium	0.0050	.0004	.0007		
Magnesium	0.20	.0068	.039		
Manganese	0.0050	.0005	.0009		
Molybdenum	2000	.0004	.0036		
Nickel	0.030	.0005	.0027		
Phosphorus	0.10	.015	.034		
Potassium	1.0	.084	.071		
Selenium	0.050	.0071	.011	0.0098	<0.050
Silicon	0.050	.0047	.0084		
Silver	0.030	.0003	.00061	0.0	<0.030
Sodium	0.40	.0073	.014		
Strontium	0.050	.00001	.0003		
Thallium	0.010	.0018	.008		
Tin	0.050	.012	.012		
Titanium	0.010	.0001	.0027		
Uranium	0.050	.0029	.0044		
Vanadium	0.010	.0004	.0006		
Zinc	0.030	.0004	.0035		

Associated samples MP25782: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

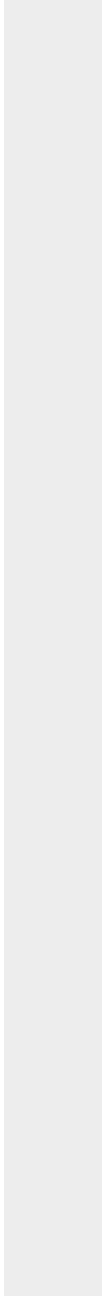
QC Batch ID: MP25782
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
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(*) Outside of QC limits
(anr) Analyte not requested



6.8.1

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-1A Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0	1.0	1.0	100.0	75-125
Barium	0.51	2.3	2.0	89.5	75-125
Beryllium					
Boron					
Cadmium	0.070	0.56	0.50	98.0	75-125
Calcium					
Chromium	0.0011	0.48	0.50	95.8	75-125
Cobalt					
Copper					
Iron					
Lead	49.8	47.5	1.00	-230.0(a)	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	0.017	1.1	1.0	108.3	75-125
Silicon					
Silver	0.0019	0.20	0.20	99.2	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP25782: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-1A Original MS	SpikeLot ICPAL2 % Rec	QC Limits
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- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.8.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-1A Original MSD		SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	1.1	1.0	110.0	9.5	20
Barium	0.51	2.4	2.0	94.5	4.3	20
Beryllium						
Boron						
Cadmium	0.070	0.58	0.50	102.0	3.5	20
Calcium						
Chromium	0.0011	0.49	0.50	97.8	2.1	20
Cobalt						
Copper						
Iron						
Lead	49.8	48.6	1.00	-120.0(a	2.3	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	0.017	1.2	1.0	118.3	8.7	20
Silicon						
Silver	0.0019	0.20	0.20	99.2	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP25782: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-1A Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
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- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1.2	1.0	120.0	80-120
Barium	2.0	2.0	100.0	80-120
Beryllium				
Boron				
Cadmium	0.57	0.50	114.0	80-120
Calcium				
Chromium	0.54	0.50	108.0	80-120
Cobalt				
Copper				
Iron				
Lead	0.90	1.0	90.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	1.3	1.0	130.0*(a	80-120
Silicon				
Silver	0.22	0.20	110.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25782: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

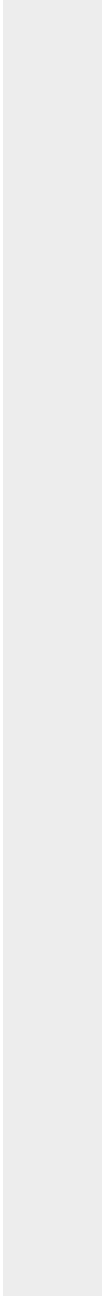
QC Batch ID: MP25782
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results < RL



6.8.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 08/06/18

Metal	DA7547-1A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	27.0	NC	0-10
Barium	547	546	6.1	0-10
Beryllium				
Boron				
Cadmium	70.4	69.5	1.3	0-10
Calcium				
Chromium	1.10	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	49800	58500	17.6*(b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC (a)	0-10
Silicon				
Silver	1.90	5.50	243.8(a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP25782: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25782
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/06/18

	DA7547-1A		QC
Metal	Original SDL 1:5	%DIF	Limits

- (*) Outside of QC limits
- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

6.8.4

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25783
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 08/06/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00010	.000011	.000024	0.000022	<0.00010

Associated samples MP25783: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.9.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25783
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-2A Original MS	Spike HGWSR1	lot % Rec	QC Limits
Mercury	0.0	0.0033	0.0031	105.6 75-125

Associated samples MP25783: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.9.2
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25783
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 08/06/18

Metal	DA7547-2A Original MSD	SpikeLot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0033	0.0031	105.6	0.0 20

Associated samples MP25783: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.9.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA7547
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP25783
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 08/06/18

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
-------	---------------	--------------------	-------	--------------

Mercury 0.0032 0.0031 102.4 80-120

Associated samples MP25783: DA7547-1A, DA7547-2A, DA7547-3A, DA7547-4A, DA7547-5A, DA7547-6A, DA7547-7A, DA7547-12A, DA7547-14A, DA7547-15A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.9.3
 6

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN43864			su	8.00	7.98	99.8	99.1-100.9%
pH	GN43864			su	6.00	6.01	100.2	99.1-100.9%

Associated Samples:

Batch GN43864: DA7547-8, DA7547-9, DA7547-10, DA7547-11

(*) Outside of QC limits

7.1
7

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA7547
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Percent	GN43895	DA7549-10	%	79.1	78.6	0.6	0-10%
Solids, Percent	GN43945	DA7701-8	%	93.8	92.4	1.5	0-10%
pH	GN43864	DA7323-1	su	8.56	8.58	0.2	0-5%

Associated Samples:

Batch GN43864: DA7547-8, DA7547-9, DA7547-10, DA7547-11

Batch GN43895: DA7547-1, DA7547-2, DA7547-3, DA7547-4, DA7547-5, DA7547-6, DA7547-7

Batch GN43945: DA7547-12, DA7547-13, DA7547-14, DA7547-15

(*) Outside of QC limits

7.2
7

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc.

Evening Star & Compromise Mine RS

SGS Job Number: DA17781

Sampling Dates: 07/16/19 - 07/23/19

Report to:

Weston Solutions, Inc.
1435 Garrison Street Suite 100
Lakewood, CO 80215
michael.worden@westonsolutions.com; molly.patterson@westonsolutions.com
ATTN: Michael Worden

Total number of pages in report: **49**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Carissa Cumine 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

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Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: DA17781

Evening Star & Compromise Mine RS

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA17781-1	07/23/19	09:30 MW	07/23/19	SO	Soil	ES-10-07232019-02
DA17781-1A	07/23/19	09:30 MW	07/23/19	SO	Soil	ES-10-07232019-02
DA17781-2	07/23/19	09:55 MW	07/23/19	SO	Soil	ES-10-07232019-04
DA17781-2A	07/23/19	09:55 MW	07/23/19	SO	Soil	ES-10-07232019-04
DA17781-3	07/23/19	10:20 MW	07/23/19	SO	Soil	ES-10-07232019-06
DA17781-3A	07/23/19	10:20 MW	07/23/19	SO	Soil	ES-10-07232019-06
DA17781-4	07/23/19	10:45 MW	07/23/19	SO	Soil	ES-10-07232019-08
DA17781-4A	07/23/19	10:45 MW	07/23/19	SO	Soil	ES-10-07232019-08
DA17781-5	07/23/19	11:00 MW	07/23/19	SO	Soil	ES-10-07232019-10
DA17781-5A	07/23/19	11:00 MW	07/23/19	SO	Soil	ES-10-07232019-10
DA17781-6	07/16/19	20:35 MW	07/23/19	SO	Soil	ES-11-07162019
DA17781-6A	07/16/19	20:35 MW	07/23/19	SO	Soil	ES-11-07162019

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

2

Client: Weston Solutions, Inc.

Job No DA17781

Site: Evening Star & Compromise Mine RS

Report Date 8/5/2019 6:05:12 PM

On 07/23/2019, 6 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 30.3 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA17781 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010C

Matrix: LEACHATE

Batch ID: MP28560

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA17781-1AMS, DA17781-1AMSD, DA17781-1ASDL were used as the QC samples for the metals analysis.
- The blank spike (BS) recovery(s) of Arsenic, Selenium are outside control limits. All sample results < RL
- The matrix spike duplicate (MSD) recovery(s) of Selenium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Calcium, Lead, Manganese, Zinc are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Aluminum, Barium, Copper, Potassium, Vanadium, Calcium, Cobalt, Iron, Lead, Magnesium, Manganese, Nickel are outside control limits for sample MP28560-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- DA17781-5A for Arsenic, Beryllium, Chromium, Copper, Selenium, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-6A for Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Copper, Nickel, Selenium, Thallium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-4A for Arsenic, Beryllium, Chromium, Copper, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-2A, -3A for Arsenic, Beryllium, Chromium, Copper, Thallium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28560-SD1 for Calcium, Cobalt, Iron, Lead, Magnesium, Manganese, Nickel: Serial dilution indicates possible matrix interference.
- DA17781-1A for Aluminum, Selenium, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28560-MB1 for Barium, Calcium, Nickel, Zinc: All sample results < RL or > 10x MB concentration.

Matrix: SO

Batch ID: MP28533

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA17771-1MS, DA17771-1MSD, DA17771-1SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Zinc, Antimony, Barium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Barium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Aluminum, Iron, Manganese are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Manganese are outside control limits for sample MP28533-S2. High RPD due to possible sample matrix or nonhomogeneity.

Monday, August 05, 2019

Page 1 of 2

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP28533

- The serial dilution RPD(s) for Arsenic, Beryllium, Cobalt, Copper, Lead, Nickel, Thallium, Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc are outside control limits for sample MP28533-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP28533-SD1 for Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc: Serial dilution indicates possible matrix interference.
- DA17781-6 for Antimony, Beryllium, Potassium, Selenium, Silver, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28533-S1 for Antimony, Barium: Spike recovery indicates possible matrix interference.
- MP28533-MB1 for Iron: All sample results < RL or > 10x MB concentration.
- DA17781-1, -2, -3, -4 for Beryllium, Chromium, Potassium, Selenium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-5 for Beryllium, Chromium, Potassium, Selenium, Sodium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.

General Chemistry By Method SM2540G-2011 M

Matrix: SO

Batch ID: GN47713

- Sample(s) DA18036-6DUP were used as the QC samples for the Solids, Percent analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

DA17781-1 ES-10-07232019-02

Aluminum	720	9.1			mg/kg	SW846 6010C
Antimony	190	54			mg/kg	SW846 6010C
Arsenic	1370	45			mg/kg	SW846 6010C
Barium	148	0.91			mg/kg	SW846 6010C
Cadmium	441	0.91			mg/kg	SW846 6010C
Calcium	13000	36			mg/kg	SW846 6010C
Cobalt	36.4	9.1			mg/kg	SW846 6010C
Copper	4530	18			mg/kg	SW846 6010C
Iron	122000	130			mg/kg	SW846 6010C
Lead	126000	91			mg/kg	SW846 6010C
Magnesium	582	18			mg/kg	SW846 6010C
Manganese	372	9.1			mg/kg	SW846 6010C
Nickel	76.9	2.7			mg/kg	SW846 6010C
Silver	690	54			mg/kg	SW846 6010C
Sodium	178	36			mg/kg	SW846 6010C
Thallium	65.4	18			mg/kg	SW846 6010C
Zinc	114000	54			mg/kg	SW846 6010C

DA17781-1A ES-10-07232019-02

Antimony	0.031	0.030			mg/l	SW846 6010C
Cadmium	0.89	0.010			mg/l	SW846 6010C
Calcium	420	0.40			mg/l	SW846 6010C
Cobalt	0.36	0.0050			mg/l	SW846 6010C
Iron	169	0.070			mg/l	SW846 6010C
Lead	16.9	0.050			mg/l	SW846 6010C
Magnesium	12.2	0.20			mg/l	SW846 6010C
Manganese	11.3	0.0050			mg/l	SW846 6010C
Nickel	1.1	0.030			mg/l	SW846 6010C
Zinc	328	0.60			mg/l	SW846 6010C

DA17781-2 ES-10-07232019-04

Aluminum	720	10			mg/kg	SW846 6010C
Antimony	189	62			mg/kg	SW846 6010C
Arsenic	1370	52			mg/kg	SW846 6010C
Barium	216	1.0			mg/kg	SW846 6010C
Cadmium	403	1.0			mg/kg	SW846 6010C
Calcium	25300	41			mg/kg	SW846 6010C
Cobalt	38.6	10			mg/kg	SW846 6010C
Copper	4340	21			mg/kg	SW846 6010C
Iron	123000	140			mg/kg	SW846 6010C
Lead	146000	100			mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

Magnesium		700	21		mg/kg	SW846 6010C
Manganese		441	10		mg/kg	SW846 6010C
Nickel		78.6	3.1		mg/kg	SW846 6010C
Silver		834	62		mg/kg	SW846 6010C
Sodium		209	41		mg/kg	SW846 6010C
Thallium		53.2	21		mg/kg	SW846 6010C
Zinc		110000	62		mg/kg	SW846 6010C

DA17781-2A ES-10-07232019-04

Cadmium		0.89	0.10		mg/l	SW846 6010C
Calcium		859	4.0		mg/l	SW846 6010C
Cobalt		0.42	0.050		mg/l	SW846 6010C
Iron		110	0.070		mg/l	SW846 6010C
Lead		14.8	0.050		mg/l	SW846 6010C
Magnesium		14.1	0.20		mg/l	SW846 6010C
Manganese		13.9	0.050		mg/l	SW846 6010C
Nickel		1.2	0.30		mg/l	SW846 6010C
Zinc		330	0.60		mg/l	SW846 6010C

DA17781-3 ES-10-07232019-06

Aluminum		787	9.7		mg/kg	SW846 6010C
Antimony		185	58		mg/kg	SW846 6010C
Arsenic		1390	49		mg/kg	SW846 6010C
Barium		186	0.97		mg/kg	SW846 6010C
Cadmium		398	0.97		mg/kg	SW846 6010C
Calcium		26000	39		mg/kg	SW846 6010C
Cobalt		37.9	9.7		mg/kg	SW846 6010C
Copper		4600	19		mg/kg	SW846 6010C
Iron		137000	140		mg/kg	SW846 6010C
Lead		126000	97		mg/kg	SW846 6010C
Magnesium		741	19		mg/kg	SW846 6010C
Manganese		535	9.7		mg/kg	SW846 6010C
Nickel		79.9	2.9		mg/kg	SW846 6010C
Silver		734	58		mg/kg	SW846 6010C
Sodium		251	39		mg/kg	SW846 6010C
Thallium		60.6	19		mg/kg	SW846 6010C
Zinc		109000	58		mg/kg	SW846 6010C

DA17781-3A ES-10-07232019-06

Cadmium		0.95	0.10		mg/l	SW846 6010C
Calcium		817	4.0		mg/l	SW846 6010C
Cobalt		0.40	0.050		mg/l	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

Iron		62.6	0.070		mg/l	SW846 6010C
Lead		13.2	0.050		mg/l	SW846 6010C
Magnesium		13.7	0.20		mg/l	SW846 6010C
Manganese		14.9	0.050		mg/l	SW846 6010C
Nickel		1.3	0.30		mg/l	SW846 6010C
Zinc		321	0.60		mg/l	SW846 6010C

DA17781-4 ES-10-07232019-08

Aluminum		699	9.3		mg/kg	SW846 6010C
Antimony		193	56		mg/kg	SW846 6010C
Arsenic		1410	47		mg/kg	SW846 6010C
Barium		202	0.93		mg/kg	SW846 6010C
Cadmium		423	0.93		mg/kg	SW846 6010C
Calcium		33900	37		mg/kg	SW846 6010C
Cobalt		36.9	9.3		mg/kg	SW846 6010C
Copper		4440	19		mg/kg	SW846 6010C
Iron		130000	130		mg/kg	SW846 6010C
Lead		131000	93		mg/kg	SW846 6010C
Magnesium		725	19		mg/kg	SW846 6010C
Manganese		372	9.3		mg/kg	SW846 6010C
Nickel		77.1	2.8		mg/kg	SW846 6010C
Silver		757	56		mg/kg	SW846 6010C
Sodium		249	37		mg/kg	SW846 6010C
Thallium		58.5	19		mg/kg	SW846 6010C
Zinc		111000	56		mg/kg	SW846 6010C

DA17781-4A ES-10-07232019-08

Cadmium		0.95	0.10		mg/l	SW846 6010C
Calcium		1310	4.0		mg/l	SW846 6010C
Cobalt		0.35	0.050		mg/l	SW846 6010C
Iron		0.41	0.070		mg/l	SW846 6010C
Lead		13.7	0.050		mg/l	SW846 6010C
Magnesium		16.5	0.20		mg/l	SW846 6010C
Manganese		14.4	0.050		mg/l	SW846 6010C
Nickel		1.2	0.30		mg/l	SW846 6010C
Thallium		0.21	0.20		mg/l	SW846 6010C
Zinc		294	0.60		mg/l	SW846 6010C

DA17781-5 ES-10-07232019-10

Aluminum		615	220		mg/kg	SW846 6010C
Antimony		165	66		mg/kg	SW846 6010C
Arsenic		1370	55		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method	
		Barium	89.7	22		mg/kg	SW846 6010C
		Cadmium	392	22		mg/kg	SW846 6010C
		Calcium	55000	880		mg/kg	SW846 6010C
		Cobalt	37.8	11		mg/kg	SW846 6010C
		Copper	3860	22		mg/kg	SW846 6010C
		Iron	118000	150		mg/kg	SW846 6010C
		Lead	137000	110		mg/kg	SW846 6010C
		Magnesium	622	440		mg/kg	SW846 6010C
		Manganese	457	11		mg/kg	SW846 6010C
		Nickel	78.9	66		mg/kg	SW846 6010C
		Silver	821	66		mg/kg	SW846 6010C
		Thallium	55.7	22		mg/kg	SW846 6010C
		Zinc	107000	66		mg/kg	SW846 6010C

DA17781-5A ES-10-07232019-10

		Barium	0.011	0.010		mg/l	SW846 6010C
		Cadmium	0.90	0.10		mg/l	SW846 6010C
		Calcium	1310	4.0		mg/l	SW846 6010C
		Cobalt	0.37	0.050		mg/l	SW846 6010C
		Iron	7.5	0.070		mg/l	SW846 6010C
		Lead	20.2	0.050		mg/l	SW846 6010C
		Magnesium	15.3	0.20		mg/l	SW846 6010C
		Manganese	14.5	0.050		mg/l	SW846 6010C
		Nickel	1.3	0.30		mg/l	SW846 6010C
		Zinc	261	0.60		mg/l	SW846 6010C

DA17781-6 ES-11-07162019

		Aluminum	2820	10		mg/kg	SW846 6010C
		Arsenic	128	51		mg/kg	SW846 6010C
		Barium	368	1.0		mg/kg	SW846 6010C
		Cadmium	30.4	1.0		mg/kg	SW846 6010C
		Calcium	2370	41		mg/kg	SW846 6010C
		Chromium	22.4	20		mg/kg	SW846 6010C
		Cobalt	22.6	10		mg/kg	SW846 6010C
		Copper	110	1.0		mg/kg	SW846 6010C
		Iron	75300	140		mg/kg	SW846 6010C
		Lead	27000	100		mg/kg	SW846 6010C
		Magnesium	1380	20		mg/kg	SW846 6010C
		Manganese	25600	10		mg/kg	SW846 6010C
		Nickel	53.2	3.1		mg/kg	SW846 6010C
		Vanadium	25.7	20		mg/kg	SW846 6010C
		Zinc	7190	61		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA17781-6A **ES-11-07162019**

Aluminum	0.10	0.10			mg/l	SW846 6010C
Barium	0.29	0.010			mg/l	SW846 6010C
Calcium	11.6	4.0			mg/l	SW846 6010C
Lead	81.5	0.050			mg/l	SW846 6010C
Magnesium	6.6	0.20			mg/l	SW846 6010C
Manganese	21.0	0.050			mg/l	SW846 6010C
Zinc	8.6	0.60			mg/l	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: ES-10-07232019-02		Date Sampled: 07/23/19
Lab Sample ID: DA17781-1		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 90.5
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	720	9.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	190	54	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1370	45	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	148	0.91	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	441	0.91	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	13000	36	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	36.4	9.1	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4530	18	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	122000	130	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	126000	91	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	582	18	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	372	9.1	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	76.9	2.7	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3600	3600	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 91	91	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	690	54	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	178	36	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	65.4	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	114000	54	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.1
4

Report of Analysis

Client Sample ID: ES-10-07232019-02	Date Sampled: 07/23/19
Lab Sample ID: DA17781-1A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 90.5
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum ^a	< 1.0			1.0	mg/l	10	07/29/19	07/30/19 JM	SW846 6010C ²	SW846 3010A ⁵
Antimony	0.031			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Arsenic	< 0.25	D004	5.0	0.25	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Beryllium	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Cadmium	0.89	D006	1.0	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Calcium	420			0.40	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Cobalt	0.36			0.0050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Copper	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Iron	169			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Lead	16.9	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Magnesium	12.2			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Manganese	11.3			0.0050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Nickel	1.1			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	07/30/19 JM	SW846 6010C ²	SW846 3010A ⁵
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁵
Vanadium	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Zinc	328			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ⁴	SW846 3010A ⁵

- (1) Instrument QC Batch: MA11611
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11634
- (4) Instrument QC Batch: MA11635
- (5) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.2
4

Report of Analysis

Client Sample ID: ES-10-07232019-04		Date Sampled: 07/23/19
Lab Sample ID: DA17781-2		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 87.4
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	720	10	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	189	62	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1370	52	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	216	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	403	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	25300	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	38.6	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4340	21	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	123000	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	146000	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	700	21	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	441	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	78.6	3.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 4100	4100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 100	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	834	62	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	209	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	53.2	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	110000	62	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: ES-10-07232019-04	Date Sampled: 07/23/19
Lab Sample ID: DA17781-2A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.4
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.89	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	859			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.42			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	110			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	14.8	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	14.1			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	13.9			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.2			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	330			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.4
4

Report of Analysis

Client Sample ID: ES-10-07232019-06		Date Sampled: 07/23/19
Lab Sample ID: DA17781-3		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 85.8
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	787	9.7	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	185	58	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1390	49	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	186	0.97	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	398	0.97	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	26000	39	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	37.9	9.7	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4600	19	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	137000	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	126000	97	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	741	19	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	535	9.7	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	79.9	2.9	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3900	3900	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 97	97	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	734	58	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	251	39	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	60.6	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	109000	58	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.5
4

Report of Analysis

Client Sample ID: ES-10-07232019-06	Date Sampled: 07/23/19
Lab Sample ID: DA17781-3A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 85.8
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.95	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	817			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.40			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	62.6			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	13.2	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	13.7			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.9			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.3			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	321			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.6
4

Report of Analysis

Client Sample ID: ES-10-07232019-08		Date Sampled: 07/23/19
Lab Sample ID: DA17781-4		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 85.2
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	699	9.3	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	193	56	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1410	47	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	202	0.93	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	423	0.93	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	33900	37	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	36.9	9.3	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4440	19	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	130000	130	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	131000	93	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	725	19	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	372	9.3	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	77.1	2.8	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3700	3700	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 93	93	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	757	56	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	249	37	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	58.5	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	111000	56	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.7
4

Report of Analysis

Client Sample ID: ES-10-07232019-08	Date Sampled: 07/23/19
Lab Sample ID: DA17781-4A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 85.2
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.95	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	1310			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.35			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	0.41			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	13.7	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	16.5			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.4			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.2			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium	0.21			0.20	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	294			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.8
4

Report of Analysis

Client Sample ID: ES-10-07232019-10	Date Sampled: 07/23/19
Lab Sample ID: DA17781-5	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.0
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	615	220	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Antimony	165	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Arsenic	1370	55	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Barium	89.7	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Beryllium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Cadmium	392	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Calcium	55000	880	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Chromium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Cobalt	37.8	11	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Copper	3860	22	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ²	SW846 3050B ³
Iron	118000	150	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Lead	137000	110	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Magnesium	622	440	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Manganese	457	11	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Nickel	78.9	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Potassium ^a	< 4400	4400	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Selenium ^a	< 110	110	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Silver	821	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Sodium ^a	< 880	880	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Thallium	55.7	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Vanadium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Zinc	107000	66	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ²	SW846 3050B ³

(1) Instrument QC Batch: MA11620

(2) Instrument QC Batch: MA11628

(3) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: ES-10-07232019-10	Date Sampled: 07/23/19
Lab Sample ID: DA17781-5A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.0
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	0.011	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.90	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	1310			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.37			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	7.5			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	20.2	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	15.3			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.5			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.3			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.20			0.20	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴
Vanadium	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	261			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.10
4

Report of Analysis

Client Sample ID: ES-11-07162019		Date Sampled: 07/16/19
Lab Sample ID: DA17781-6		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 93.5
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	2820	10	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony ^a	< 61	61	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	128	51	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	368	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 20	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	30.4	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	2370	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium	22.4	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	22.6	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	110	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Iron	75300	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	27000	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	1380	20	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	25600	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	53.2	3.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 4100	4100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 100	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver ^a	< 61	61	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	< 41	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium ^a	< 51	51	mg/kg	50	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Vanadium	25.7	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	7190	61	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: ES-11-07162019	Date Sampled: 07/16/19
Lab Sample ID: DA17781-6A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 93.5
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	0.29	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium ^a	< 0.10	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	11.6			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt ^a	< 0.050			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	< 0.070			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	81.5	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	6.6			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	21.0			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel ^a	< 0.30			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	8.6			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.12
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS Accutest Sample Receipt Summary

Job Number: DA17781

Client: WESTON

Project: EVENING STAR

Date / Time Received: 7/23/2019 1:05:00 PM

Delivery Method: _____

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (30.3/30.3):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>IR Gun;</u> | |
| 3. Cooler media: | <u>Ice (Bag)</u> | |
| 4. No. Coolers: | <u>1</u> | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

5.1
5

Job Change Order: DA17781

Requested Date: 7/29/2019 Received Date: 7/23/2019
Account Name: Weston Solutions, Inc. Due Date: 7/30/2019
Project Description: Evening Star & Compromise Mine RS Deliverable: COMMBN+
CSR: CC TAT (Days): 7

=====
Sample #: DA17781-1a Change: cancel ENA
Dept: TAT: 7

=====
ES-10-07232019-02

=====
Sample #: DA17781-2a Change: cancel ENA
Dept: TAT: 7

=====
ES-10-07232019-04

=====
Sample #: DA17781-3a Change: cancel ENA
Dept: TAT: 7

=====
ES-10-07232019-06

=====
Sample #: DA17781-4a Change: cancel ENA
Dept: TAT: 7

=====
ES-10-07232019-08

=====

Above Changes Per: Janel Date/Time: 7/30/2019 11:04:23 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.



Job Change Order: DA17781

Requested Date: 7/29/2019 **Received Date:** 7/23/2019
Account Name: Weston Solutions, Inc. **Due Date:** 7/30/2019
Project Description: Evening Star & Compromise Mine RS **Deliverable:** COMMBN+
CSR: CC **TAT (Days):** 7

Sample #: DA17781-5a **Change:**
cancel ENA

Dept:
TAT: 7

ES-10-07232019-10

Sample #: DA17781-6a **Change:**
cancel ENA

Dept:
TAT: 7

ES-11-07162019

Unable to run TCLP Na because Na is in the extraction fluid.

Above Changes Per: Janel **Date/Time:** 7/30/2019 11:04:23 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	4.6	1.7	1.2	<10
Antimony	3.0	1.4	.82	0.78	<3.0
Arsenic	2.5	2.2	1	0.92	<2.5
Barium	1.0	.03	.16	0.030	<1.0
Beryllium	1.0	.1	.16	0.010	<1.0
Boron	5.0	.33	.29		
Cadmium	1.0	.19	.1	0.070	<1.0
Calcium	40	.66	9.6	5.7	<40
Chromium	1.0	.11	.19	0.12	<1.0
Cobalt	0.50	.27	.12	0.18	<0.50
Copper	1.0	.46	.48	0.17	<1.0
Iron	7.0	.89	.69	7.0	* (a)
Lead	5.0	1.3	.6	0.090	<5.0
Lithium	0.50	.06	.07		
Magnesium	20	5	3.9	3.5	<20
Manganese	0.50	.05	.07	0.030	<0.50
Molybdenum	1.0	.85	.36		
Nickel	3.0	.62	.24	-0.13	<3.0
Phosphorus	10	9.1	4.3		
Potassium	200	8.4	6	2.2	<200
Selenium	5.0	3	1	0.090	<5.0
Silicon	5.0	4.1	.91		
Silver	3.0	.06	.05	0.0	<3.0
Sodium	40	1.3	1.5	0.63	<40
Strontium	5.0	.01	.03		
Thallium	1.0	1.7	.86	-0.11	<1.0
Tin	5.0	4.1	1.2		
Titanium	1.0	.05	.27		
Uranium	5.0	.39	.44		
Vanadium	1.0	.09	.07	-0.030	<1.0
Zinc	3.0	.9	.35	0.57	<3.0

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested
(a) All sample results < RL or > 10x MB concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum	11500	13300	543	331.3(a)	75-125
Antimony	0.0	14.2	54.5	26.2N(b)	75-125
Arsenic	11.3	106	109	87.1	75-125
Barium	259	404	217	64.9N(b)	75-125
Beryllium	2.2	49.6	54.3	87.2	75-125
Boron					
Cadmium	0.0	46.7	54.3	85.9	75-125
Calcium	2490	4570	2720	76.6	75-125
Chromium	22.9	66.7	54.3	82.3	75-125
Cobalt	6.7	49.5	54.3	78.8	75-125
Copper	20.6	67.2	54.3	85.8	75-125
Iron	21100	19500	543	-404.9(a)	75-125
Lead	8.2	91.8	109	76.9	75-125
Lithium					
Magnesium	3370	5410	2720	75.1	75-125
Manganese	532	543	54.3	20.2 (a)	75-125
Molybdenum					
Nickel	16.1	56.2	54.3	75.8	75-125
Phosphorus					
Potassium	3320	5510	2720	84.7	75-125
Selenium	0.0	96.6	109	88.9	75-125
Silicon					
Silver	0.0	17.0	21.7	78.2	75-125
Sodium	497	2970	2720	91.0	75-125
Strontium					
Thallium	3.2	87.2	109	76.4	75-125
Tin					
Titanium					
Uranium					
Vanadium	32.9	78.9	54.3	84.7	75-125
Zinc	58.8	97.8	54.3	71.8N(c)	75-125

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MS	SpikeLot ICPALL2	% Rec	QC Limits
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.
- (c) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

6.1.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MSD		Spikelot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum	11500	15100	534	674.8(a)	12.7	20
Antimony	0.0	13.2	53.5	28.8N(b)	7.3	20
Arsenic	11.3	103	107	85.9	2.9	20
Barium	259	402	213	65.1N(b)	0.5	20
Beryllium	2.2	48.8	53.4	87.3	1.6	20
Boron						
Cadmium	0.0	45.7	53.4	85.7	2.2	20
Calcium	2490	4690	2670	82.5	2.6	20
Chromium	22.9	68.8	53.4	87.7	3.1	20
Cobalt	6.7	50.0	53.4	81.2	1.0	20
Copper	20.6	69.4	53.4	91.5	3.2	20
Iron	21100	23500	534	337.4(a)	18.6	20
Lead	8.2	92.1	107	78.6	0.3	20
Lithium						
Magnesium	3370	5870	2670	93.7	8.2	20
Manganese	532	679	53.4	275.5(a)	22.3 (c)	20
Molybdenum						
Nickel	16.1	58.2	53.4	81.0	3.5	20
Phosphorus						
Potassium	3320	6000	2670	104.6	8.5	20
Selenium	0.0	93.2	107	87.3	3.6	20
Silicon						
Silver	0.0	16.0	21.3	75.0	6.1	20
Sodium	497	2980	2670	93.0	0.3	20
Strontium						
Thallium	3.2	84.8	107	75.5	2.8	20
Tin						
Titanium						
Uranium						
Vanadium	32.9	83.0	53.4	93.9	5.1	20
Zinc	58.8	105	53.4	86.6	7.1	20

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MSD	SpikeLot ICPALL2	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.
- (c) High RPD due to possible sample matrix or nonhomogeneity.

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	477	500	95.4	80-120
Antimony	45.7	50	91.4	80-120
Arsenic	94.1	100	94.1	80-120
Barium	196	200	98.0	80-120
Beryllium	46.8	50	93.6	80-120
Boron				
Cadmium	45.6	50	91.2	80-120
Calcium	2250	2500	90.0	80-120
Chromium	45.7	50	91.4	80-120
Cobalt	43.6	50	87.2	80-120
Copper	46.5	50	93.0	80-120
Iron	486	500	97.2	80-120
Lead	84.4	100	84.4	80-120
Lithium				
Magnesium	2460	2500	98.4	80-120
Manganese	44.9	50	89.8	80-120
Molybdenum				
Nickel	43.1	50	86.2	80-120
Phosphorus				
Potassium	2360	2500	94.4	80-120
Selenium	95.0	100	95.0	80-120
Silicon				
Silver	18.3	20	91.5	80-120
Sodium	2350	2500	94.0	80-120
Strontium				
Thallium	88.1	100	88.1	80-120
Tin				
Titanium				
Uranium				
Vanadium	46.2	50	92.4	80-120
Zinc	49.9	50	99.8	80-120

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

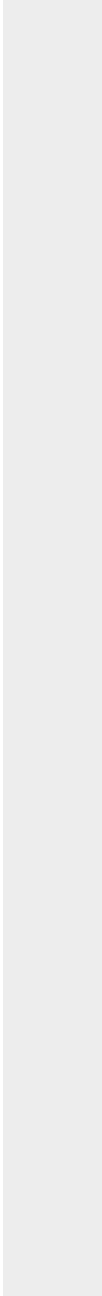
QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 07/24/19

Metal	DA17771-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	103000	121000	18.3*(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	101	150	47.9 (b)	0-10
Barium	2350	2760	17.3*(a)	0-10
Beryllium	19.9	24.0	20.6 (b)	0-10
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	22300	26300	17.8*(a)	0-10
Chromium	205	236	20.0*(a)	0-10
Cobalt	59.8	78.0	30.4 (b)	0-10
Copper	186	212	15.0 (b)	0-10
Iron	189000	227000	16.9*(a)	0-10
Lead	91.5	107	45.3 (b)	0-10
Lithium				
Magnesium	30200	35100	16.3*(a)	0-10
Manganese	4960	5800	21.8*(a)	0-10
Molybdenum				
Nickel	134	164	22.0 (b)	0-10
Phosphorus				
Potassium	28800	33100	15.1*(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	4460	5170	16.0*(a)	0-10
Strontium				
Thallium	37.7	0.00	100.0(b)	0-10
Tin				
Titanium				
Uranium				
Vanadium	300	349	18.3*(a)	0-10
Zinc	526	628	19.3*(a)	0-10

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 07/24/19

Metal	DA17771-1	QC
	Original SDL 1:5 %DIF	Limits

- (anr) Analyte not requested
- (a) Serial dilution indicates possible matrix interference.
- (b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.1.4

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.011	.015	-0.013	<0.10
Antimony	0.030	.0021	.0068	0.0046	<0.030
Arsenic	0.025	.0038	.0046	-0.0053	<0.25
Barium	0.010	.0002	.0013	0.0064	* (a)
Beryllium	0.010	.0009	.0013	-0.0013	<0.010
Boron	0.050	.0008	.0063		
Cadmium	0.010	.0002	.0013	0.0010	<0.010
Calcium	0.40	.0024	.05	0.53	* (a)
Chromium	0.010	.0003	.0013	0.0014	<0.010
Cobalt	0.0050	.0005	.00063	0.00020	<0.0050
Copper	0.010	.0008	.0013	0.0032	<0.010
Iron	0.070	.0015	.012	0.027	<0.070
Lead	0.050	.0021	.0063	0.00040	<0.050
Lithium	0.0050	.0004	.0013		
Magnesium	0.20	.0068	.025	0.075	<0.20
Manganese	0.0050	.0005	.00063	0.0022	<0.0050
Molybdenum	0.010	.0004	.0028		
Nickel	0.030	.0005	.0038	0.049	* (a)
Phosphorus	0.10	.015	.016		
Potassium	1.0	.084	.13	1.4	<5.0
Selenium	0.050	.0071	.022	0.012	<0.050
Silicon	0.050	.0047	.015		
Silver	0.030	.0003	.0038	0.00010	<0.030
Sodium	0.40	.0073	.05		
Strontium	0.0050	.00001	.00063		
Thallium	0.010	.0018	.0043	-0.0026	<0.010
Tin	0.060	.012	.051		
Titanium	0.010	.0001	.0013		
Uranium	0.050	.0029	.0085		
Vanadium	0.010	.0004	.0013	-0.00080	<0.010
Zinc	0.030	.009	.0038	0.027	* (a)

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

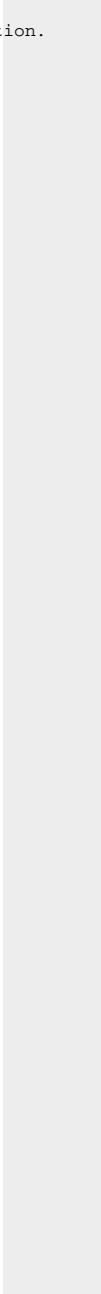
QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested
(a) All sample results < RL or > 10x MB concentration.



6.2.1
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum	0.39	5.4	5.0	100.2	75-125
Antimony	0.0	0.58	0.50	109.8	75-125
Arsenic	0.0	1.2	1.0	120.0	75-125
Barium	0.0	2.0	2.0	99.8	75-125
Beryllium	0.0	0.47	0.50	94.0	75-125
Boron					
Cadmium	0.85	1.4	0.50	102.0	75-125
Calcium	424	432	25.0	48.0 (a)	75-125
Chromium	0.0	0.45	0.50	90.0	75-125
Cobalt	0.42	0.77	0.50	82.0	75-125
Copper	0.0	0.52	0.50	103.7	75-125
Iron	169	173	5.00	80.0	75-125
Lead	20.4	17.4	1.00	50.0 (a)	75-125
Lithium					
Magnesium	13.4	36.0	25.0	95.2	75-125
Manganese	11.3	11.5	0.500	40.0 (a)	75-125
Molybdenum					
Nickel	1.1	1.5	0.50	80.0	75-125
Phosphorus					
Potassium	2.0	31.0	25.0	116.0	75-125
Selenium	0.0	1.2	1.0	120.0	75-125
Silicon					
Silver	0.0	0.22	0.20	110.0	75-125
Sodium					
Strontium					
Thallium	0.0	0.88	1.0	88.0	75-125
Tin					
Titanium					
Uranium					
Vanadium	0.022	0.49	0.50	97.2	75-125
Zinc	328	348	0.500	4000.0(a)	75-125

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MS	SpikeLot ICPAL2	% Rec	QC Limits
-------	---------------------------	--------------------	-------	--------------

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.2.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MSD		SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum	0.39	5.2	5.0	96.2	3.8	20
Antimony	0.0	0.58	0.50	109.8	0.0	20
Arsenic	0.0	1.2	1.0	120.0	0.0	20
Barium	0.0	2.0	2.0	99.8	0.0	20
Beryllium	0.0	0.47	0.50	94.0	0.0	20
Boron						
Cadmium	0.85	1.4	0.50	102.0	0.0	20
Calcium	424	433	25.0	52.0 (a)	0.2	20
Chromium	0.0	0.45	0.50	90.0	0.0	20
Cobalt	0.42	0.77	0.50	82.0	0.0	20
Copper	0.0	0.52	0.50	103.7	0.0	20
Iron	169	173	5.00	80.0	0.0	20
Lead	20.4	17.5	1.00	60.0 (a)	0.6	20
Lithium						
Magnesium	13.4	36.0	25.0	95.2	0.0	20
Manganese	11.3	11.4	0.500	20.0 (a)	0.9	20
Molybdenum						
Nickel	1.1	1.5	0.50	80.0	0.0	20
Phosphorus						
Potassium	2.0	31.5	25.0	118.0	1.6	20
Selenium	0.0	1.3	1.0	130.0N(b)	8.0	20
Silicon						
Silver	0.0	0.22	0.20	110.0	0.0	20
Sodium						
Strontium						
Thallium	0.0	0.97	1.0	97.0	9.7	20
Tin						
Titanium						
Uranium						
Vanadium	0.022	0.49	0.50	97.2	0.0	20
Zinc	328	344	0.500	4000.0(a)	1.2	20

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
-------	----------------------------	---------------------------	------------	-------------

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.

6.2.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	4.8	5.0	96.0	80-120
Antimony	0.57	0.50	104.0	80-120
Arsenic	1.3	1.0	130.0*(a)	80-120
Barium	1.9	2.0	95.0	80-120
Beryllium	0.54	0.50	108.0	80-120
Boron				
Cadmium	0.60	0.50	120.0	80-120
Calcium	29.8	25.0	119.2	80-120
Chromium	0.55	0.50	110.0	80-120
Cobalt	0.51	0.50	102.0	80-120
Copper	0.47	0.50	94.0	80-120
Iron	4.9	5.0	98.0	80-120
Lead	0.98	1.0	98.0	80-120
Lithium				
Magnesium	22.9	25.0	91.6	80-120
Manganese	0.50	0.50	100.0	80-120
Molybdenum				
Nickel	0.54	0.50	108.0	80-120
Phosphorus				
Potassium	29.5	25.0	118.0	80-120
Selenium	1.4	1.0	140.0*(a)	80-120
Silicon				
Silver	0.23	0.20	115.0	80-120
Sodium				
Strontium				
Thallium	0.85	1.0	85.0	80-120
Tin				
Titanium				
Uranium				
Vanadium	0.53	0.50	106.0	80-120
Zinc	0.55	0.50	110.0	80-120

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

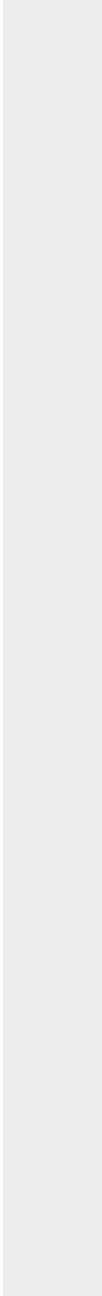
QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
-------	---------------	---------------------	-------	--------------

(anr) Analyte not requested
(a) All sample results < RL



6.2.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 07/29/19

Metal	DA17781-1A Original SDL 1:5		%DIF	QC Limits
Aluminum	432	0.00	100.0 (a)	0-10
Antimony	68.0	29.5	4.2	0-10
Arsenic	64.0	0.00	NC	0-10
Barium	4.00	7.00	40.0 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Boron				
Cadmium	854	864	2.6	0-10
Calcium	463000	463000	10.1*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	416	395	10.9*(b)	0-10
Copper	29.0	0.00	100.0(a)	0-10
Iron	169000	197000	16.6*(b)	0-10
Lead	16900	19700	16.1*(b)	0-10
Lithium				
Magnesium	13400	13800	13.4*(b)	0-10
Manganese	11300	12500	10.5*(b)	0-10
Molybdenum				
Nickel	1060	1170	10.5*(b)	0-10
Phosphorus				
Potassium	1240	4580	124.5(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Uranium				
Vanadium	19.0	3.00	26.8 (a)	0-10
Zinc	328000	353000	7.7	0-10

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 07/29/19

Metal	DA17781-1A Original SDL 1:5	%DIF	QC Limits
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- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

6.2.4
6

Attachment D

PLM Analytical Report



August 14, 2018

Subcontract Number: NA
Laboratory Report: RES 414812-1
Project # / P.O. # 20408.016.001.0618.08
Project Description: Evening Star Mine

Elliott Petri
Weston Solutions, Inc. (CO)
1435 Garrison St. Ste. 100
Lakewood CO 80215

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 414812-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,


Nicole Castillo for

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 414812-1**
 Client: **Weston Solutions, Inc. (CO)**
 Client Project Number / P.O.: **20408.016.001.0618.08**
 Client Project Description: **Evening Star Mine**
 Date Samples Received: **July 30, 2018**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **Standard**
 Date Samples Analyzed: **August 12, 2018**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
ES-RM01-01	EM 2137055	A	Black felt	100		ND	60	40
ES-RM01-02	EM 2137056	A	Green/black shingle	45		ND	30	70
		B	Black felt	55		ND	60	40
ES-RM01-03	EM 2137057	A	Black felt	40		ND	60	40
		B	Green/black shingle	60		ND	25	75
ES-IN01-04	EM 2137058	A	Light tan insulation	100		ND	90	10
ES-IN01-05	EM 2137059	A	Light pink insulation	100		ND	90	10
ES-IN01-06	EM 2137060	A	White insulation	100		ND	90	10

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.


Tyler Hutchinson

Analyst


Michael Scales

Data QA

Attachment B

Treatability Study Laboratory Results

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc.

Evening Star & Compromise Mine RS

SGS Job Number: DA17781

Sampling Dates: 07/16/19 - 07/23/19

Report to:

Weston Solutions, Inc.
1435 Garrison Street Suite 100
Lakewood, CO 80215
michael.worden@westonsolutions.com; molly.patterson@westonsolutions.com
ATTN: Michael Worden

Total number of pages in report: **49**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read 'Scott Heideman'.

Scott Heideman
Laboratory Director

Client Service contact: Carissa Cumine 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: DA17781

Evening Star & Compromise Mine RS

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA17781-1	07/23/19	09:30 MW	07/23/19	SO	Soil	ES-10-07232019-02
DA17781-1A	07/23/19	09:30 MW	07/23/19	SO	Soil	ES-10-07232019-02
DA17781-2	07/23/19	09:55 MW	07/23/19	SO	Soil	ES-10-07232019-04
DA17781-2A	07/23/19	09:55 MW	07/23/19	SO	Soil	ES-10-07232019-04
DA17781-3	07/23/19	10:20 MW	07/23/19	SO	Soil	ES-10-07232019-06
DA17781-3A	07/23/19	10:20 MW	07/23/19	SO	Soil	ES-10-07232019-06
DA17781-4	07/23/19	10:45 MW	07/23/19	SO	Soil	ES-10-07232019-08
DA17781-4A	07/23/19	10:45 MW	07/23/19	SO	Soil	ES-10-07232019-08
DA17781-5	07/23/19	11:00 MW	07/23/19	SO	Soil	ES-10-07232019-10
DA17781-5A	07/23/19	11:00 MW	07/23/19	SO	Soil	ES-10-07232019-10
DA17781-6	07/16/19	20:35 MW	07/23/19	SO	Soil	ES-11-07162019
DA17781-6A	07/16/19	20:35 MW	07/23/19	SO	Soil	ES-11-07162019

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Weston Solutions, Inc.

Job No DA17781

Site: Evening Star & Compromise Mine RS

Report Date 8/5/2019 6:05:12 PM

On 07/23/2019, 6 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 30.3 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA17781 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010C

Matrix: LEACHATE

Batch ID: MP28560

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA17781-1AMS, DA17781-1AMSD, DA17781-1ASDL were used as the QC samples for the metals analysis.
- The blank spike (BS) recovery(s) of Arsenic, Selenium are outside control limits. All sample results < RL
- The matrix spike duplicate (MSD) recovery(s) of Selenium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Calcium, Lead, Manganese, Zinc are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Aluminum, Barium, Copper, Potassium, Vanadium, Calcium, Cobalt, Iron, Lead, Magnesium, Manganese, Nickel are outside control limits for sample MP28560-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- DA17781-5A for Arsenic, Beryllium, Chromium, Copper, Selenium, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-6A for Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Copper, Nickel, Selenium, Thallium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-4A for Arsenic, Beryllium, Chromium, Copper, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-2A, -3A for Arsenic, Beryllium, Chromium, Copper, Thallium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28560-SD1 for Calcium, Cobalt, Iron, Lead, Magnesium, Manganese, Nickel: Serial dilution indicates possible matrix interference.
- DA17781-1A for Aluminum, Selenium, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28560-MB1 for Barium, Calcium, Nickel, Zinc: All sample results < RL or > 10x MB concentration.

Matrix: SO

Batch ID: MP28533

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA17771-1MS, DA17771-1MSD, DA17771-1SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Zinc, Antimony, Barium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Barium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Aluminum, Iron, Manganese are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Manganese are outside control limits for sample MP28533-S2. High RPD due to possible sample matrix or nonhomogeneity.

Monday, August 05, 2019

Page 1 of 2

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP28533

- The serial dilution RPD(s) for Arsenic, Beryllium, Cobalt, Copper, Lead, Nickel, Thallium, Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc are outside control limits for sample MP28533-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP28533-SD1 for Aluminum, Barium, Calcium, Chromium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc: Serial dilution indicates possible matrix interference.
- DA17781-6 for Antimony, Beryllium, Potassium, Selenium, Silver, Thallium: Elevated detection limit due to dilution required for possible matrix interference.
- MP28533-S1 for Antimony, Barium: Spike recovery indicates possible matrix interference.
- MP28533-MB1 for Iron: All sample results < RL or > 10x MB concentration.
- DA17781-1, -2, -3, -4 for Beryllium, Chromium, Potassium, Selenium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.
- DA17781-5 for Beryllium, Chromium, Potassium, Selenium, Sodium, Vanadium: Elevated detection limit due to dilution required for possible matrix interference.

General Chemistry By Method SM2540G-2011 M

Matrix: SO

Batch ID: GN47713

- Sample(s) DA18036-6DUP were used as the QC samples for the Solids, Percent analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

DA17781-1 ES-10-07232019-02

Aluminum	720	9.1			mg/kg	SW846 6010C
Antimony	190	54			mg/kg	SW846 6010C
Arsenic	1370	45			mg/kg	SW846 6010C
Barium	148	0.91			mg/kg	SW846 6010C
Cadmium	441	0.91			mg/kg	SW846 6010C
Calcium	13000	36			mg/kg	SW846 6010C
Cobalt	36.4	9.1			mg/kg	SW846 6010C
Copper	4530	18			mg/kg	SW846 6010C
Iron	122000	130			mg/kg	SW846 6010C
Lead	126000	91			mg/kg	SW846 6010C
Magnesium	582	18			mg/kg	SW846 6010C
Manganese	372	9.1			mg/kg	SW846 6010C
Nickel	76.9	2.7			mg/kg	SW846 6010C
Silver	690	54			mg/kg	SW846 6010C
Sodium	178	36			mg/kg	SW846 6010C
Thallium	65.4	18			mg/kg	SW846 6010C
Zinc	114000	54			mg/kg	SW846 6010C

DA17781-1A ES-10-07232019-02

Antimony	0.031	0.030			mg/l	SW846 6010C
Cadmium	0.89	0.010			mg/l	SW846 6010C
Calcium	420	0.40			mg/l	SW846 6010C
Cobalt	0.36	0.0050			mg/l	SW846 6010C
Iron	169	0.070			mg/l	SW846 6010C
Lead	16.9	0.050			mg/l	SW846 6010C
Magnesium	12.2	0.20			mg/l	SW846 6010C
Manganese	11.3	0.0050			mg/l	SW846 6010C
Nickel	1.1	0.030			mg/l	SW846 6010C
Zinc	328	0.60			mg/l	SW846 6010C

DA17781-2 ES-10-07232019-04

Aluminum	720	10			mg/kg	SW846 6010C
Antimony	189	62			mg/kg	SW846 6010C
Arsenic	1370	52			mg/kg	SW846 6010C
Barium	216	1.0			mg/kg	SW846 6010C
Cadmium	403	1.0			mg/kg	SW846 6010C
Calcium	25300	41			mg/kg	SW846 6010C
Cobalt	38.6	10			mg/kg	SW846 6010C
Copper	4340	21			mg/kg	SW846 6010C
Iron	123000	140			mg/kg	SW846 6010C
Lead	146000	100			mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		Magnesium	700	21		mg/kg SW846 6010C
		Manganese	441	10		mg/kg SW846 6010C
		Nickel	78.6	3.1		mg/kg SW846 6010C
		Silver	834	62		mg/kg SW846 6010C
		Sodium	209	41		mg/kg SW846 6010C
		Thallium	53.2	21		mg/kg SW846 6010C
		Zinc	110000	62		mg/kg SW846 6010C

DA17781-2A ES-10-07232019-04

		Cadmium	0.89	0.10		mg/l SW846 6010C
		Calcium	859	4.0		mg/l SW846 6010C
		Cobalt	0.42	0.050		mg/l SW846 6010C
		Iron	110	0.070		mg/l SW846 6010C
		Lead	14.8	0.050		mg/l SW846 6010C
		Magnesium	14.1	0.20		mg/l SW846 6010C
		Manganese	13.9	0.050		mg/l SW846 6010C
		Nickel	1.2	0.30		mg/l SW846 6010C
		Zinc	330	0.60		mg/l SW846 6010C

DA17781-3 ES-10-07232019-06

		Aluminum	787	9.7		mg/kg SW846 6010C
		Antimony	185	58		mg/kg SW846 6010C
		Arsenic	1390	49		mg/kg SW846 6010C
		Barium	186	0.97		mg/kg SW846 6010C
		Cadmium	398	0.97		mg/kg SW846 6010C
		Calcium	26000	39		mg/kg SW846 6010C
		Cobalt	37.9	9.7		mg/kg SW846 6010C
		Copper	4600	19		mg/kg SW846 6010C
		Iron	137000	140		mg/kg SW846 6010C
		Lead	126000	97		mg/kg SW846 6010C
		Magnesium	741	19		mg/kg SW846 6010C
		Manganese	535	9.7		mg/kg SW846 6010C
		Nickel	79.9	2.9		mg/kg SW846 6010C
		Silver	734	58		mg/kg SW846 6010C
		Sodium	251	39		mg/kg SW846 6010C
		Thallium	60.6	19		mg/kg SW846 6010C
		Zinc	109000	58		mg/kg SW846 6010C

DA17781-3A ES-10-07232019-06

		Cadmium	0.95	0.10		mg/l SW846 6010C
		Calcium	817	4.0		mg/l SW846 6010C
		Cobalt	0.40	0.050		mg/l SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Iron		62.6	0.070		mg/l	SW846 6010C
Lead		13.2	0.050		mg/l	SW846 6010C
Magnesium		13.7	0.20		mg/l	SW846 6010C
Manganese		14.9	0.050		mg/l	SW846 6010C
Nickel		1.3	0.30		mg/l	SW846 6010C
Zinc		321	0.60		mg/l	SW846 6010C

DA17781-4 ES-10-07232019-08

Aluminum		699	9.3		mg/kg	SW846 6010C
Antimony		193	56		mg/kg	SW846 6010C
Arsenic		1410	47		mg/kg	SW846 6010C
Barium		202	0.93		mg/kg	SW846 6010C
Cadmium		423	0.93		mg/kg	SW846 6010C
Calcium		33900	37		mg/kg	SW846 6010C
Cobalt		36.9	9.3		mg/kg	SW846 6010C
Copper		4440	19		mg/kg	SW846 6010C
Iron		130000	130		mg/kg	SW846 6010C
Lead		131000	93		mg/kg	SW846 6010C
Magnesium		725	19		mg/kg	SW846 6010C
Manganese		372	9.3		mg/kg	SW846 6010C
Nickel		77.1	2.8		mg/kg	SW846 6010C
Silver		757	56		mg/kg	SW846 6010C
Sodium		249	37		mg/kg	SW846 6010C
Thallium		58.5	19		mg/kg	SW846 6010C
Zinc		111000	56		mg/kg	SW846 6010C

DA17781-4A ES-10-07232019-08

Cadmium		0.95	0.10		mg/l	SW846 6010C
Calcium		1310	4.0		mg/l	SW846 6010C
Cobalt		0.35	0.050		mg/l	SW846 6010C
Iron		0.41	0.070		mg/l	SW846 6010C
Lead		13.7	0.050		mg/l	SW846 6010C
Magnesium		16.5	0.20		mg/l	SW846 6010C
Manganese		14.4	0.050		mg/l	SW846 6010C
Nickel		1.2	0.30		mg/l	SW846 6010C
Thallium		0.21	0.20		mg/l	SW846 6010C
Zinc		294	0.60		mg/l	SW846 6010C

DA17781-5 ES-10-07232019-10

Aluminum		615	220		mg/kg	SW846 6010C
Antimony		165	66		mg/kg	SW846 6010C
Arsenic		1370	55		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		89.7	22		mg/kg	SW846 6010C
		392	22		mg/kg	SW846 6010C
		55000	880		mg/kg	SW846 6010C
		37.8	11		mg/kg	SW846 6010C
		3860	22		mg/kg	SW846 6010C
		118000	150		mg/kg	SW846 6010C
		137000	110		mg/kg	SW846 6010C
		622	440		mg/kg	SW846 6010C
		457	11		mg/kg	SW846 6010C
		78.9	66		mg/kg	SW846 6010C
		821	66		mg/kg	SW846 6010C
		55.7	22		mg/kg	SW846 6010C
		107000	66		mg/kg	SW846 6010C

DA17781-5A ES-10-07232019-10

		0.011	0.010		mg/l	SW846 6010C
		0.90	0.10		mg/l	SW846 6010C
		1310	4.0		mg/l	SW846 6010C
		0.37	0.050		mg/l	SW846 6010C
		7.5	0.070		mg/l	SW846 6010C
		20.2	0.050		mg/l	SW846 6010C
		15.3	0.20		mg/l	SW846 6010C
		14.5	0.050		mg/l	SW846 6010C
		1.3	0.30		mg/l	SW846 6010C
		261	0.60		mg/l	SW846 6010C

DA17781-6 ES-11-07162019

		2820	10		mg/kg	SW846 6010C
		128	51		mg/kg	SW846 6010C
		368	1.0		mg/kg	SW846 6010C
		30.4	1.0		mg/kg	SW846 6010C
		2370	41		mg/kg	SW846 6010C
		22.4	20		mg/kg	SW846 6010C
		22.6	10		mg/kg	SW846 6010C
		110	1.0		mg/kg	SW846 6010C
		75300	140		mg/kg	SW846 6010C
		27000	100		mg/kg	SW846 6010C
		1380	20		mg/kg	SW846 6010C
		25600	10		mg/kg	SW846 6010C
		53.2	3.1		mg/kg	SW846 6010C
		25.7	20		mg/kg	SW846 6010C
		7190	61		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA17781
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS
Collected: 07/16/19 thru 07/23/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA17781-6A **ES-11-07162019**

Aluminum	0.10	0.10			mg/l	SW846 6010C
Barium	0.29	0.010			mg/l	SW846 6010C
Calcium	11.6	4.0			mg/l	SW846 6010C
Lead	81.5	0.050			mg/l	SW846 6010C
Magnesium	6.6	0.20			mg/l	SW846 6010C
Manganese	21.0	0.050			mg/l	SW846 6010C
Zinc	8.6	0.60			mg/l	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: ES-10-07232019-02		Date Sampled: 07/23/19
Lab Sample ID: DA17781-1		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 90.5
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	720	9.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	190	54	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1370	45	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	148	0.91	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	441	0.91	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	13000	36	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	36.4	9.1	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4530	18	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	122000	130	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	126000	91	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	582	18	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	372	9.1	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	76.9	2.7	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3600	3600	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 91	91	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	690	54	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	178	36	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	65.4	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 18	18	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	114000	54	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.1
4

Report of Analysis

Client Sample ID: ES-10-07232019-02	Date Sampled: 07/23/19
Lab Sample ID: DA17781-1A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 90.5
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum ^a	< 1.0			1.0	mg/l	10	07/29/19	07/30/19 JM	SW846 6010C ²	SW846 3010A ⁵
Antimony	0.031			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Arsenic	< 0.25	D004	5.0	0.25	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Beryllium	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Cadmium	0.89	D006	1.0	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Calcium	420			0.40	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Cobalt	0.36			0.0050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Copper	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Iron	169			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Lead	16.9	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Magnesium	12.2			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Manganese	11.3			0.0050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Nickel	1.1			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	07/30/19 JM	SW846 6010C ²	SW846 3010A ⁵
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁵
Vanadium	< 0.010			0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁵
Zinc	328			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ⁴	SW846 3010A ⁵

- (1) Instrument QC Batch: MA11611
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11634
- (4) Instrument QC Batch: MA11635
- (5) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.2
4

Report of Analysis

Client Sample ID: ES-10-07232019-04

Lab Sample ID: DA17781-2

Matrix: SO - Soil

Date Sampled: 07/23/19

Date Received: 07/23/19

Percent Solids: 87.4

Project: Evening Star & Compromise Mine RS

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	720	10	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	189	62	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1370	52	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	216	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	403	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	25300	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	38.6	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4340	21	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	123000	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	146000	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	700	21	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	441	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	78.6	3.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 4100	4100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 100	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	834	62	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	209	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	53.2	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 21	21	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	110000	62	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

(1) Instrument QC Batch: MA11609

(2) Instrument QC Batch: MA11620

(3) Instrument QC Batch: MA11628

(4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: ES-10-07232019-04	Date Sampled: 07/23/19
Lab Sample ID: DA17781-2A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.4
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.89	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	859			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.42			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	110			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	14.8	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	14.1			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	13.9			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.2			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	330			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.4
4

Report of Analysis

Client Sample ID: ES-10-07232019-06		Date Sampled: 07/23/19
Lab Sample ID: DA17781-3		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 85.8
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	787	9.7	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	185	58	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1390	49	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	186	0.97	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	398	0.97	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	26000	39	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	37.9	9.7	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4600	19	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	137000	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	126000	97	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	741	19	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	535	9.7	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	79.9	2.9	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3900	3900	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 97	97	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	734	58	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	251	39	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	60.6	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	109000	58	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: ES-10-07232019-06	Date Sampled: 07/23/19
Lab Sample ID: DA17781-3A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 85.8
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.95	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	817			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.40			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	62.6			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	13.2	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	13.7			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.9			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.3			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	321			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.6
4

Report of Analysis

Client Sample ID: ES-10-07232019-08		Date Sampled: 07/23/19
Lab Sample ID: DA17781-4		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 85.2
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	699	9.3	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony	193	56	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	1410	47	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	202	0.93	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	423	0.93	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	33900	37	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	36.9	9.3	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	4440	19	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Iron	130000	130	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	131000	93	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	725	19	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	372	9.3	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	77.1	2.8	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 3700	3700	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 93	93	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	757	56	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	249	37	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium	58.5	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 19	19	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	111000	56	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.7
4

Report of Analysis

Client Sample ID: ES-10-07232019-08	Date Sampled: 07/23/19
Lab Sample ID: DA17781-4A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 85.2
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	< 0.010	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.95	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	1310			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.35			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	0.41			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	13.7	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	16.5			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.4			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.2			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium	0.21			0.20	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	294			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.8
4

Report of Analysis

Client Sample ID: ES-10-07232019-10	Date Sampled: 07/23/19
Lab Sample ID: DA17781-5	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.0
Project: Evening Star & Compromise Mine RS	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	615	220	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Antimony	165	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Arsenic	1370	55	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Barium	89.7	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Beryllium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Cadmium	392	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Calcium	55000	880	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Chromium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Cobalt	37.8	11	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Copper	3860	22	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ²	SW846 3050B ³
Iron	118000	150	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Lead	137000	110	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Magnesium	622	440	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Manganese	457	11	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Nickel	78.9	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Potassium ^a	< 4400	4400	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Selenium ^a	< 110	110	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Silver	821	66	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Sodium ^a	< 880	880	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Thallium	55.7	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Vanadium ^a	< 22	22	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ¹	SW846 3050B ³
Zinc	107000	66	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ²	SW846 3050B ³

(1) Instrument QC Batch: MA11620

(2) Instrument QC Batch: MA11628

(3) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: ES-10-07232019-10	Date Sampled: 07/23/19
Lab Sample ID: DA17781-5A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 87.0
Project: Evening Star & Compromise Mine RS	

4.10
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	0.011	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.90	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	1310			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt	0.37			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	7.5			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	20.2	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	15.3			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	14.5			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel	1.3			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.20			0.20	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴
Vanadium	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	261			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: ES-11-07162019		Date Sampled: 07/16/19
Lab Sample ID: DA17781-6		Date Received: 07/23/19
Matrix: SO - Soil		Percent Solids: 93.5
Project: Evening Star & Compromise Mine RS		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	2820	10	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Antimony ^a	< 61	61	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Arsenic	128	51	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	368	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Beryllium ^a	< 20	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	30.4	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Calcium	2370	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Chromium	22.4	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cobalt	22.6	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Copper	110	1.0	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Iron	75300	140	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Lead	27000	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Magnesium	1380	20	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Manganese	25600	10	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Nickel	53.2	3.1	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Potassium ^a	< 4100	4100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 100	100	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver ^a	< 61	61	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Sodium	< 41	41	mg/kg	1	07/24/19	07/29/19 JM	SW846 6010C ¹	SW846 3050B ⁴
Thallium ^a	< 51	51	mg/kg	50	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴
Vanadium	25.7	20	mg/kg	20	07/24/19	07/30/19 JM	SW846 6010C ²	SW846 3050B ⁴
Zinc	7190	61	mg/kg	20	07/24/19	07/31/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11609
- (2) Instrument QC Batch: MA11620
- (3) Instrument QC Batch: MA11628
- (4) Prep QC Batch: MP28533

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.11
4

Report of Analysis

Client Sample ID: ES-11-07162019	Date Sampled: 07/16/19
Lab Sample ID: DA17781-6A	Date Received: 07/23/19
Matrix: SO - Soil	Percent Solids: 93.5
Project: Evening Star & Compromise Mine RS	

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	0.10			0.10	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Antimony	< 0.030			0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Arsenic ^a	< 2.5	D004	5.0	2.5	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Barium	0.29	D005	100	0.010	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Beryllium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cadmium ^a	< 0.10	D006	1.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Calcium	11.6			4.0	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Chromium ^a	< 0.10	D007	5.0	0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Cobalt ^a	< 0.050			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Copper ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Iron	< 0.070			0.070	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Lead	81.5	D008	5.0	0.050	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Magnesium	6.6			0.20	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Manganese	21.0			0.050	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Nickel ^a	< 0.30			0.30	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Potassium	< 5.0			5.0	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Selenium ^a	< 0.50	D010	1.0	0.50	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	07/29/19	07/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Thallium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Vanadium ^a	< 0.10			0.10	mg/l	10	07/29/19	08/02/19 JM	SW846 6010C ²	SW846 3010A ⁴
Zinc	8.6			0.60	mg/l	20	07/29/19	08/02/19 JM	SW846 6010C ³	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11620
- (2) Instrument QC Batch: MA11634
- (3) Instrument QC Batch: MA11635
- (4) Prep QC Batch: MP28560

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehsusa

Bottle Order Control #	FED-EX Tracking #
SGS Quote #	SGS Job # DA17781

Client / Reporting Information		Project Information										Requested Analysis (see TEST CODE sheet)										Matrix Codes
Company: Weston Solutions, Inc.		Project Name: Evening Star and Compromise Mine RV																				DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank
Street: 1435 Garrison St. Suite 100		Street: Neihart, MT																				
City, State: Lakewood, CO		City, State: Neihart, MT																				LAB USE ONLY c1 c2 c3 c4 o1 o2
Project Contact: Michael Worden		Project #: Michael Worden																				
Phone: 303-729-6131		Client Purchase Order #:																				
Email: michael.worden@westonsolutions.com		Street Address:																				
Sampler(s) Name(s): Michael Worden		Project Manager:																				
		Attention:																				
		Number of preserved Bottles																				
Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	NONE	PC	NiOH	HNO3	H2SO4	DI Water	MEOH	ENSOIE	NA2S2O3	NA2SO3	TAL Total Metals (no Hg)	TAL TCLP Metals (no Hg)					
ES-10-07232019-02	7/23/2019	930	MW	SO	2	2										X	X					
ES-10-07232019-04	7/23/2019	955	MW	SO	2	2										X	X					
ES-10-07232019-06	7/23/2019	1020	MW	SO	2	2										X	X					
ES-10-07232019-08	7/23/2019	1045	MW	SO	2	2										X	X					
ES-10-07232019-10	7/23/2019	1100	MW	SO	2	2										X	X					
ES-11-07162019	7/16/2019	2035	MW	SO	2	2										X	X					

Turnaround Time (Business days)		Data Deliverable Information										Comments / Special Instructions									
<input checked="" type="checkbox"/> Standard 10 Business Days <input type="checkbox"/> 5 Business Days RUSH <input type="checkbox"/> 3 Business Days RUSH <input type="checkbox"/> 2 Business Days RUSH <input type="checkbox"/> 1 Business Day EMERGENCY		<input type="checkbox"/> Commercial "A" (Level 1, Results Only) <input checked="" type="checkbox"/> Commercial "B" (Level 2, Results + QC Summary) <input type="checkbox"/> COMMBN (Results/QC/Narrative) <input type="checkbox"/> COMMBN+ (Results/QC/Narrative (+ chromatograms)) <input type="checkbox"/> REDT2 <input type="checkbox"/> FULT1																			
Special Reporting Instructions		<input type="checkbox"/> Report in PPB <input type="checkbox"/> Report in PPM <input type="checkbox"/> Report MDLs																			
Emergency & Rush TIA data available via LabLink. RUSH TAT approval needed.		<input checked="" type="checkbox"/> EDD Format <input type="checkbox"/> SCRIBE																			
Sample Custody must be documented below each time samples change possession, including courier delivery.																					
Relinquished by Sampler	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time				
<i>[Signature]</i>	7/23/2019 1305	<i>[Signature]</i>	2	<i>[Signature]</i>	2	<i>[Signature]</i>	4	<i>[Signature]</i>	4	<i>[Signature]</i>	4	<i>[Signature]</i>	4	<i>[Signature]</i>	4	<i>[Signature]</i>	4				
Custody Seal #	Intact <input type="checkbox"/>	Not Intact <input type="checkbox"/>	Absent <input type="checkbox"/>	Preserved where applicable <input type="checkbox"/>	Cooler Temp. °C: 30.3	Therm. ID: 7060	On Ice <input type="checkbox"/>	http://www.sgs.com/en/terms-and-conditions													

Sample COC 07232019 Rev. Date: 4/10/18

DA17781: Chain of Custody

Page 1 of 4



5.1
5

SGS Accutest Sample Receipt Summary

Job Number: DA17781

Client: WESTON

Project: EVENING STAR

Date / Time Received: 7/23/2019 1:05:00 PM

Delivery Method: _____

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (30.3/30.3):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>IR Gun;</u> | |
| 3. Cooler media: | <u>Ice (Bag)</u> | |
| 4. No. Coolers: | <u>1</u> | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

5.1
5

Job Change Order: DA17781

Requested Date: 7/29/2019 Received Date: 7/23/2019
Account Name: Weston Solutions, Inc. Due Date: 7/30/2019
Project Description: Evening Star & Compromise Mine RS Deliverable: COMMBN+
CSR: CC TAT (Days): 7

=====
Sample #: DA17781-1a Change: cancel ENA
Dept:
TAT: 7

=====
ES-10-07232019-02
Sample #: DA17781-2a Change: cancel ENA
Dept:
TAT: 7

=====
ES-10-07232019-04
Sample #: DA17781-3a Change: cancel ENA
Dept:
TAT: 7

=====
ES-10-07232019-06
Sample #: DA17781-4a Change: cancel ENA
Dept:
TAT: 7

=====
ES-10-07232019-08
Sample #: DA17781-4a Change: cancel ENA
Dept:
TAT: 7

Above Changes Per: Janel Date/Time: 7/30/2019 11:04:23 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.



Job Change Order: DA17781

Requested Date: 7/29/2019 **Received Date:** 7/23/2019
Account Name: Weston Solutions, Inc. **Due Date:** 7/30/2019
Project Description: Evening Star & Compromise Mine RS **Deliverable:** COMMBN+
CSR: CC **TAT (Days):** 7

Sample #: DA17781-5a **Change:**
cancel ENA

Dept:
TAT: 7

ES-10-07232019-10

Sample #: DA17781-6a **Change:**
cancel ENA

Dept:
TAT: 7

ES-11-07162019

Unable to run TCLP Na because Na is in the extraction fluid.

Above Changes Per: Janel

Date/Time: 7/30/2019 11:04:23 AM

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	4.6	1.7	1.2	<10
Antimony	3.0	1.4	.82	0.78	<3.0
Arsenic	2.5	2.2	1	0.92	<2.5
Barium	1.0	.03	.16	0.030	<1.0
Beryllium	1.0	.1	.16	0.010	<1.0
Boron	5.0	.33	.29		
Cadmium	1.0	.19	.1	0.070	<1.0
Calcium	40	.66	9.6	5.7	<40
Chromium	1.0	.11	.19	0.12	<1.0
Cobalt	0.50	.27	.12	0.18	<0.50
Copper	1.0	.46	.48	0.17	<1.0
Iron	7.0	.89	.69	7.0	* (a)
Lead	5.0	1.3	.6	0.090	<5.0
Lithium	0.50	.06	.07		
Magnesium	20	5	3.9	3.5	<20
Manganese	0.50	.05	.07	0.030	<0.50
Molybdenum	1.0	.85	.36		
Nickel	3.0	.62	.24	-0.13	<3.0
Phosphorus	10	9.1	4.3		
Potassium	200	8.4	6	2.2	<200
Selenium	5.0	3	1	0.090	<5.0
Silicon	5.0	4.1	.91		
Silver	3.0	.06	.05	0.0	<3.0
Sodium	40	1.3	1.5	0.63	<40
Strontium	5.0	.01	.03		
Thallium	1.0	1.7	.86	-0.11	<1.0
Tin	5.0	4.1	1.2		
Titanium	1.0	.05	.27		
Uranium	5.0	.39	.44		
Vanadium	1.0	.09	.07	-0.030	<1.0
Zinc	3.0	.9	.35	0.57	<3.0

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

(a) All sample results < RL or > 10x MB concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum	11500	13300	543	331.3(a)	75-125
Antimony	0.0	14.2	54.5	26.2N(b)	75-125
Arsenic	11.3	106	109	87.1	75-125
Barium	259	404	217	64.9N(b)	75-125
Beryllium	2.2	49.6	54.3	87.2	75-125
Boron					
Cadmium	0.0	46.7	54.3	85.9	75-125
Calcium	2490	4570	2720	76.6	75-125
Chromium	22.9	66.7	54.3	82.3	75-125
Cobalt	6.7	49.5	54.3	78.8	75-125
Copper	20.6	67.2	54.3	85.8	75-125
Iron	21100	19500	543	-404.9(a)	75-125
Lead	8.2	91.8	109	76.9	75-125
Lithium					
Magnesium	3370	5410	2720	75.1	75-125
Manganese	532	543	54.3	20.2 (a)	75-125
Molybdenum					
Nickel	16.1	56.2	54.3	75.8	75-125
Phosphorus					
Potassium	3320	5510	2720	84.7	75-125
Selenium	0.0	96.6	109	88.9	75-125
Silicon					
Silver	0.0	17.0	21.7	78.2	75-125
Sodium	497	2970	2720	91.0	75-125
Strontium					
Thallium	3.2	87.2	109	76.4	75-125
Tin					
Titanium					
Uranium					
Vanadium	32.9	78.9	54.3	84.7	75-125
Zinc	58.8	97.8	54.3	71.8N(c)	75-125

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MS	SpikeLot ICPALL2	% Rec	QC Limits
-------	--------------------------	---------------------	-------	--------------

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.
- (c) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

6.1.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MSD		Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum	11500	15100	534	674.8(a)	12.7	20
Antimony	0.0	13.2	53.5	28.8N(b)	7.3	20
Arsenic	11.3	103	107	85.9	2.9	20
Barium	259	402	213	65.1N(b)	0.5	20
Beryllium	2.2	48.8	53.4	87.3	1.6	20
Boron						
Cadmium	0.0	45.7	53.4	85.7	2.2	20
Calcium	2490	4690	2670	82.5	2.6	20
Chromium	22.9	68.8	53.4	87.7	3.1	20
Cobalt	6.7	50.0	53.4	81.2	1.0	20
Copper	20.6	69.4	53.4	91.5	3.2	20
Iron	21100	23500	534	337.4(a)	18.6	20
Lead	8.2	92.1	107	78.6	0.3	20
Lithium						
Magnesium	3370	5870	2670	93.7	8.2	20
Manganese	532	679	53.4	275.5(a)	22.3 (c)	20
Molybdenum						
Nickel	16.1	58.2	53.4	81.0	3.5	20
Phosphorus						
Potassium	3320	6000	2670	104.6	8.5	20
Selenium	0.0	93.2	107	87.3	3.6	20
Silicon						
Silver	0.0	16.0	21.3	75.0	6.1	20
Sodium	497	2980	2670	93.0	0.3	20
Strontium						
Thallium	3.2	84.8	107	75.5	2.8	20
Tin						
Titanium						
Uranium						
Vanadium	32.9	83.0	53.4	93.9	5.1	20
Zinc	58.8	105	53.4	86.6	7.1	20

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	DA17771-1 Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.
- (c) High RPD due to possible sample matrix or nonhomogeneity.

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 07/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	477	500	95.4	80-120
Antimony	45.7	50	91.4	80-120
Arsenic	94.1	100	94.1	80-120
Barium	196	200	98.0	80-120
Beryllium	46.8	50	93.6	80-120
Boron				
Cadmium	45.6	50	91.2	80-120
Calcium	2250	2500	90.0	80-120
Chromium	45.7	50	91.4	80-120
Cobalt	43.6	50	87.2	80-120
Copper	46.5	50	93.0	80-120
Iron	486	500	97.2	80-120
Lead	84.4	100	84.4	80-120
Lithium				
Magnesium	2460	2500	98.4	80-120
Manganese	44.9	50	89.8	80-120
Molybdenum				
Nickel	43.1	50	86.2	80-120
Phosphorus				
Potassium	2360	2500	94.4	80-120
Selenium	95.0	100	95.0	80-120
Silicon				
Silver	18.3	20	91.5	80-120
Sodium	2350	2500	94.0	80-120
Strontium				
Thallium	88.1	100	88.1	80-120
Tin				
Titanium				
Uranium				
Vanadium	46.2	50	92.4	80-120
Zinc	49.9	50	99.8	80-120

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

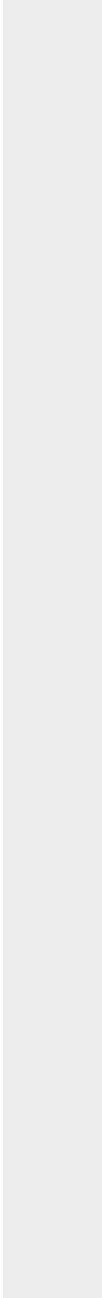
QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 07/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



6.1.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 07/24/19

Metal	DA17771-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	103000	121000	18.3*(a)	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	101	150	47.9 (b)	0-10
Barium	2350	2760	17.3*(a)	0-10
Beryllium	19.9	24.0	20.6 (b)	0-10
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	22300	26300	17.8*(a)	0-10
Chromium	205	236	20.0*(a)	0-10
Cobalt	59.8	78.0	30.4 (b)	0-10
Copper	186	212	15.0 (b)	0-10
Iron	189000	227000	16.9*(a)	0-10
Lead	91.5	107	45.3 (b)	0-10
Lithium				
Magnesium	30200	35100	16.3*(a)	0-10
Manganese	4960	5800	21.8*(a)	0-10
Molybdenum				
Nickel	134	164	22.0 (b)	0-10
Phosphorus				
Potassium	28800	33100	15.1*(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	4460	5170	16.0*(a)	0-10
Strontium				
Thallium	37.7	0.00	100.0(b)	0-10
Tin				
Titanium				
Uranium				
Vanadium	300	349	18.3*(a)	0-10
Zinc	526	628	19.3*(a)	0-10

Associated samples MP28533: DA17781-1, DA17781-2, DA17781-3, DA17781-4, DA17781-5, DA17781-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28533
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 07/24/19

Metal	DA17771-1	QC
	Original SDL 1:5 %DIF	Limits

- (anr) Analyte not requested
- (a) Serial dilution indicates possible matrix interference.
- (b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.1.4
6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.011	.015	-0.013	<0.10
Antimony	0.030	.0021	.0068	0.0046	<0.030
Arsenic	0.025	.0038	.0046	-0.0053	<0.25
Barium	0.010	.0002	.0013	0.0064	* (a)
Beryllium	0.010	.0009	.0013	-0.0013	<0.010
Boron	0.050	.0008	.0063		
Cadmium	0.010	.0002	.0013	0.0010	<0.010
Calcium	0.40	.0024	.05	0.53	* (a)
Chromium	0.010	.0003	.0013	0.0014	<0.010
Cobalt	0.0050	.0005	.00063	0.00020	<0.0050
Copper	0.010	.0008	.0013	0.0032	<0.010
Iron	0.070	.0015	.012	0.027	<0.070
Lead	0.050	.0021	.0063	0.00040	<0.050
Lithium	0.0050	.0004	.0013		
Magnesium	0.20	.0068	.025	0.075	<0.20
Manganese	0.0050	.0005	.00063	0.0022	<0.0050
Molybdenum	0.010	.0004	.0028		
Nickel	0.030	.0005	.0038	0.049	* (a)
Phosphorus	0.10	.015	.016		
Potassium	1.0	.084	.13	1.4	<5.0
Selenium	0.050	.0071	.022	0.012	<0.050
Silicon	0.050	.0047	.015		
Silver	0.030	.0003	.0038	0.00010	<0.030
Sodium	0.40	.0073	.05		
Strontium	0.0050	.00001	.00063		
Thallium	0.010	.0018	.0043	-0.0026	<0.010
Tin	0.060	.012	.051		
Titanium	0.010	.0001	.0013		
Uranium	0.050	.0029	.0085		
Vanadium	0.010	.0004	.0013	-0.00080	<0.010
Zinc	0.030	.009	.0038	0.027	* (a)

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

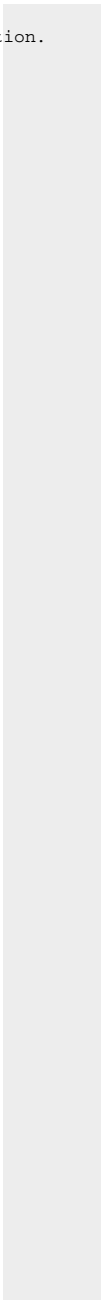
Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

(a) All sample results < RL or > 10x MB concentration.



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum	0.39	5.4	5.0	100.2	75-125
Antimony	0.0	0.58	0.50	109.8	75-125
Arsenic	0.0	1.2	1.0	120.0	75-125
Barium	0.0	2.0	2.0	99.8	75-125
Beryllium	0.0	0.47	0.50	94.0	75-125
Boron					
Cadmium	0.85	1.4	0.50	102.0	75-125
Calcium	424	432	25.0	48.0 (a)	75-125
Chromium	0.0	0.45	0.50	90.0	75-125
Cobalt	0.42	0.77	0.50	82.0	75-125
Copper	0.0	0.52	0.50	103.7	75-125
Iron	169	173	5.00	80.0	75-125
Lead	20.4	17.4	1.00	50.0 (a)	75-125
Lithium					
Magnesium	13.4	36.0	25.0	95.2	75-125
Manganese	11.3	11.5	0.500	40.0 (a)	75-125
Molybdenum					
Nickel	1.1	1.5	0.50	80.0	75-125
Phosphorus					
Potassium	2.0	31.0	25.0	116.0	75-125
Selenium	0.0	1.2	1.0	120.0	75-125
Silicon					
Silver	0.0	0.22	0.20	110.0	75-125
Sodium					
Strontium					
Thallium	0.0	0.88	1.0	88.0	75-125
Tin					
Titanium					
Uranium					
Vanadium	0.022	0.49	0.50	97.2	75-125
Zinc	328	348	0.500	4000.0(a)	75-125

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MS	SpikeLot ICPALL2	% Rec	QC Limits
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.2.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MSD		SpikeLot ICPAL2	% Rec	MSD RPD	QC Limit
Aluminum	0.39	5.2	5.0	96.2	3.8	20
Antimony	0.0	0.58	0.50	109.8	0.0	20
Arsenic	0.0	1.2	1.0	120.0	0.0	20
Barium	0.0	2.0	2.0	99.8	0.0	20
Beryllium	0.0	0.47	0.50	94.0	0.0	20
Boron						
Cadmium	0.85	1.4	0.50	102.0	0.0	20
Calcium	424	433	25.0	52.0 (a)	0.2	20
Chromium	0.0	0.45	0.50	90.0	0.0	20
Cobalt	0.42	0.77	0.50	82.0	0.0	20
Copper	0.0	0.52	0.50	103.7	0.0	20
Iron	169	173	5.00	80.0	0.0	20
Lead	20.4	17.5	1.00	60.0 (a)	0.6	20
Lithium						
Magnesium	13.4	36.0	25.0	95.2	0.0	20
Manganese	11.3	11.4	0.500	20.0 (a)	0.9	20
Molybdenum						
Nickel	1.1	1.5	0.50	80.0	0.0	20
Phosphorus						
Potassium	2.0	31.5	25.0	118.0	1.6	20
Selenium	0.0	1.3	1.0	130.0N(b)	8.0	20
Silicon						
Silver	0.0	0.22	0.20	110.0	0.0	20
Sodium						
Strontium						
Thallium	0.0	0.97	1.0	97.0	9.7	20
Tin						
Titanium						
Uranium						
Vanadium	0.022	0.49	0.50	97.2	0.0	20
Zinc	328	344	0.500	4000.0(a)	1.2	20

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	DA17781-1A Original MSD	Spike lot ICPALL2 % Rec	MSD RPD	QC Limit
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.

6.2.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 07/29/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	4.8	5.0	96.0	80-120
Antimony	0.57	0.50	104.0	80-120
Arsenic	1.3	1.0	130.0*(a)	80-120
Barium	1.9	2.0	95.0	80-120
Beryllium	0.54	0.50	108.0	80-120
Boron				
Cadmium	0.60	0.50	120.0	80-120
Calcium	29.8	25.0	119.2	80-120
Chromium	0.55	0.50	110.0	80-120
Cobalt	0.51	0.50	102.0	80-120
Copper	0.47	0.50	94.0	80-120
Iron	4.9	5.0	98.0	80-120
Lead	0.98	1.0	98.0	80-120
Lithium				
Magnesium	22.9	25.0	91.6	80-120
Manganese	0.50	0.50	100.0	80-120
Molybdenum				
Nickel	0.54	0.50	108.0	80-120
Phosphorus				
Potassium	29.5	25.0	118.0	80-120
Selenium	1.4	1.0	140.0*(a)	80-120
Silicon				
Silver	0.23	0.20	115.0	80-120
Sodium				
Strontium				
Thallium	0.85	1.0	85.0	80-120
Tin				
Titanium				
Uranium				
Vanadium	0.53	0.50	106.0	80-120
Zinc	0.55	0.50	110.0	80-120

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

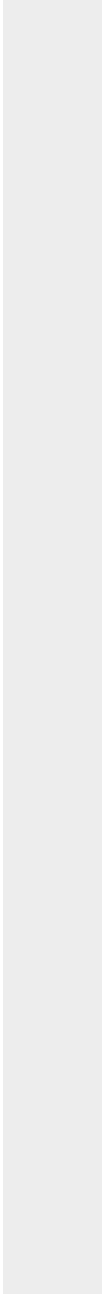
QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 07/29/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested
(a) All sample results < RL



6.2.3
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 07/29/19

Metal	DA17781-1A Original SDL 1:5		%DIF	QC Limits
Aluminum	432	0.00	100.0 (a)	0-10
Antimony	68.0	29.5	4.2	0-10
Arsenic	64.0	0.00	NC	0-10
Barium	4.00	7.00	40.0 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Boron				
Cadmium	854	864	2.6	0-10
Calcium	463000	463000	10.1*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	416	395	10.9*(b)	0-10
Copper	29.0	0.00	100.0(a)	0-10
Iron	169000	197000	16.6*(b)	0-10
Lead	16900	19700	16.1*(b)	0-10
Lithium				
Magnesium	13400	13800	13.4*(b)	0-10
Manganese	11300	12500	10.5*(b)	0-10
Molybdenum				
Nickel	1060	1170	10.5*(b)	0-10
Phosphorus				
Potassium	1240	4580	124.5(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Uranium				
Vanadium	19.0	3.00	26.8 (a)	0-10
Zinc	328000	353000	7.7	0-10

Associated samples MP28560: DA17781-1A, DA17781-2A, DA17781-3A, DA17781-4A, DA17781-5A, DA17781-6A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA17781
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RS

QC Batch ID: MP28560
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 07/29/19

Metal	DA17781-1A Original SDL 1:5	%DIF	QC Limits
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- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

6.2.4

6

TREATABILITY STUDY RESULTS
Premier: Weston Solutions - Evening Star
August 30, 2019

Compositional Results (mg/kg)											
Sample Name	Urus Lab ID	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Solids	Bulk Density Tons/Yards
ES-11-SO-08212019	19-08014	128	<0.50	2%	36.7	32	<2.51	<4.51	19.3	90%	224
ES-10-SO-08212019	19-08015	111	135	23.7	47.7	17,254	<14.3	<8.56	62.6	94%	1.90

Leaching Results															
Sample Name	Urus Lab ID	EnviroBlend® Dosage		Protect pH	Solution	Final pH	Screening Leaching Test Results								
		Chemical	Percentage				Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Lead mg/L	Mercury mg/L	Selenium mg/L	Silver mg/L	
TCLP 1 test	-	-	-	-	-	-	5	100	1	5	5	62	1	5	
ES-10-SO-08212019	19-08014	Untreated	-	1.62	TCLP1	4.52	0.16	0.069	1.96	0.068	22.8	<0.050	<0.030	0.011	
			2%	-	TCLP1	5.33	<0.030	0.024	1.83	<0.005	35.3	<0.050	<0.030	<0.005	
			3%	-	TCLP1	6.13	<0.030	0.011	1.58	<0.005	32.0	<0.050	<0.030	<0.005	
		EnviroBlend® CS	4%	-	TCLP1	6.71	<0.030	0.012	1.45	<0.005	29.8	<0.050	<0.030	<0.005	
			10%	2.91	TCLP1	7.04	<0.030	0.029	2.00	<0.005	26.9	<0.050	<0.030	<0.005	
			11%	3.17	TCLP1	7.05	<0.030	0.032	2.22	<0.005	25.7	<0.050	<0.030	<0.005	
			12%	3.97	TCLP1	7.17	<0.030	0.028	1.94	<0.005	24.8	<0.050	<0.030	<0.005	
			4%	5.62	TCLP2	4.84	<0.030	0.036	2.80	<0.005	20.4	<0.050	<0.030	<0.005	
			5%	5.66	TCLP2	5.13	<0.030	0.026	2.83	<0.005	24.4	<0.050	<0.030	<0.005	
			6%	5.82	TCLP2	6.01	<0.030	0.018	2.43	<0.005	31.1	<0.050	<0.030	<0.005	
			10%	-	TCLP2	7.48	<0.030	0.12	0.61	<0.005	13.5	<0.050	<0.030	<0.005	
			15%	-	TCLP2	9.30	<0.030	0.29	<0.024	<0.005	16.2	<0.050	<0.030	<0.005	
			20%	-	TCLP2	9.72	<0.030	0.083	<0.024	<0.005	29.1	<0.050	<0.030	<0.005	
			EnviroBlend® WINV	25%	-	TCLP2	9.85	<0.030	0.030	<0.024	<0.005	13.1	<0.050	<0.030	<0.005
				1.58	TCLP1	4.88	<0.030	0.32	0.067	<0.005	111	<0.050	<0.030	<0.005	
				2%	-	TCLP1	4.69	<0.030	0.20	0.025	<0.005	3.79	<0.050	<0.030	<0.005
				3%	-	TCLP1	9.45	<0.030	0.15	<0.024	<0.005	0.12	<0.050	<0.030	<0.005
4%	-	TCLP1		9.89	<0.030	0.20	<0.024	<0.005	<0.067	<0.050	<0.030	<0.005			
ES-11-SO-08212019	19-08015	Untreated	-	1.58	TCLP1	4.88	<0.030	0.32	0.067	<0.005	111	<0.050	<0.030	<0.005	
			2%	-	TCLP1	4.69	<0.030	0.20	0.025	<0.005	3.79	<0.050	<0.030	<0.005	
		EnviroBlend® CS	3%	-	TCLP1	9.45	<0.030	0.15	<0.024	<0.005	0.12	<0.050	<0.030	<0.005	
			4%	-	TCLP1	9.89	<0.030	0.20	<0.024	<0.005	<0.067	<0.050	<0.030	<0.005	

NOTES:

- The screening TCLP test is a modified, scaled-down TCLP leaching test that gives results that are similar to those of a standard TCLP test on the waste material. The screening test is not suitable for regulatory submissions.
- Premier Chemicals product EnviroBlend® is the ground item you used in the treatability study. Other products and particle sizes should be tested to ensure that they provide comparable results prior to using the other products.
- The treatability results demonstrate the effect of the treatment on the sample tested. Extrapolation of the results to waste streams or contaminated sites depends on the representativeness of the samples collected.

Attachment C

EnviroBlend CS Safety Data Sheet

Issue Date 02-Dec-2014

Revision Date 24-March-2017

Version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name ENVIROBLEND® CS

Other means of identification

Product Code ENVIROBLEND® CS

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use A specialty blend of magnesium oxide, magnesium hydroxide used for heavy metals remediation.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Premier Magnesia, LLC, 75 Giles Place, Waynesville, NC 28786

Emergency telephone number

Company Phone Number 828-452-4784

24 Hour Emergency Phone Number Chemtrec 1-800-424-9300

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

Product dust is classified as a "nuisance particulate, not otherwise regulated" as specified by ACGHI and OSHA. The excessive, long-term inhalation of mineral dusts may contribute to the development of industrial bronchitis, reduced breathing capacity, and may lead to the increased susceptibility to lung disease. Contact with water may cause product to swell, generate some heat and burst its container. Low toxicity.

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Fine powder to fine granular

Physical state Solid

Odor Odorless

Causes mild irritation to the eyes

Low toxicity by skin contact.

Chronic overexposure by inhalation of airborne particulate may irritate upper respiratory system as well as the throat.

Ingestion is an unlikely route of exposure. If ingested in large amounts it may cause irritation, nausea, vomiting, diarrhea, abdominal pain, black stool, pink urine, coma and possibly death.

Hazards not otherwise classified (HNOC)

Other Information

Unknown Acute Toxicity

100% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Magnesium Oxide	1309-48-4	70	
Magnesium Hydroxide	1309-42-8	30	

4. FIRST AID MEASURES

First aid measures

Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Skin Contact	Wash with soap and water. Low toxicity by skin contact.
Inhalation	Move victim to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Ingestion	Ingestion is an unlikely route of exposure. If ingested in sufficient quantity and victim is conscious, give 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Water reacts with magnesium oxide producing magnesium hydroxide and heat. Do not allow water to get inside containers: reaction with water will cause product to swell, generate heat, and burst its container. If contact is unavoidable, use sufficient water to safely absorb the heat that may be generated.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Carefully clean up and place material into a suitable container, being careful to avoid creating excessive dust. If conditions warrant, clean up personnel should wear approved respiratory protection, gloves and goggles to prevent irritation from contact and/or inhalation.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Avoid generation of dust. Do not allow water to get inside containers; reaction with water will cause product to swell, generate heat and burst its container. Exposed, unprotected magnesium oxide will absorb moisture and carbon dioxide from the air.

Incompatible materials Magnesium Oxide component is soluble in aqueous acids generating heat and steam; violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride). Incandescent reaction with phosphorus pentachloride.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium Oxide 1309-48-4	TWA: 10 mg/m ³ inhalable fraction	TWA: 15 mg/m ³ fume, total particulate (vacated) TWA: 10 mg/m ³ fume and total particulate	IDLH: 750 mg/m ³ fume

NIOSH IDLH Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

Appropriate engineering controls

Engineering Controls Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations below allowable exposure limits. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. The use of eye protection is recommended.

Skin and body protection The use of eye protection, gloves and long sleeve clothing is recommended.

Respiratory protection Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

General Hygiene Considerations Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Odorless
Appearance	Fine powder to fine granular	Odor threshold	No information available
Color	Brownish		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	10-11		
Melting point/freezing point	Melting pt >2100 °C Melting pt >3800 °F		
Boiling point / boiling range	No information available		
Flash point	No information available		
Evaporation rate	Not Applicable		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific Gravity	3.56 g/cc		
Water solubility	Slight <1%		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	70-80lb/ft3

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Magnesium Oxide component is soluble in aqueous acids generating heat and steam; violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride). Incandescent reaction with phosphorus pentachloride.

Hazardous Decomposition Products

Heat and steam.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Magnesium Oxide # 1309-48-4 Magnesium Hydroxide #1309-42-8 Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	Inhalation of fume (not MgO dust particulate) produced upon decomposition of magnesium compounds can produce a febrile reaction and leukocytosis in humans.
Eye contact	Irritating to eyes.
Skin Contact	Low toxicity by skin contact.
Ingestion	Ingestion is an unlikely route of exposure. If ingested in large amounts it may cause irritation, nausea, vomiting, diarrhea, abdominal pain, black stool, pink urine, coma and possibly death.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium Hydroxide 1309-42-8	= 8500 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available on any adverse effects of this material on the environment

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes This product does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal. Follow all applicable federal, state and local regulations for safe disposal.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT Not regulated Not regulated by DOT as a hazardous material. No hazard class, label or placard required, no UN or NA number assigned.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	Complies							
	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Magnesium Oxide	X	X	X	X	X	X	X	X
Magnesium Hydroxide	X	X	X	X	X	X	X	X

X - Listed

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

This product does not contain any substances reportable under Sections 302, 304 or 313. Sections 311 and 312 do apply. (Routine Reporting and Chemical Inventories)

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain chemicals known to the State of California to cause cancer, birthdefects or other reproductive toxins.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Magnesium Oxide 1309-48-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties - Personal protection X
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	

Issue Date 02-Dec-2014
Revision Date 24-March-2017

Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Attachment D

Photo Logs

Evening Star Mine

Photo Log

Description: Historic Buildings

Category: Assessment

Latitude: 46.9440305555556

Date Taken: 5/3/2018

Longitude: -110.747391666667

Tags:



Description: Blasting cap found near historic processing building.

Category: Assessment

Latitude: 46.9443138888889

Date Taken: 5/3/2018

Longitude: -110.74675

Tags:



Description: Evening Star Mine buildings prior to construction activities.

Category: Site Photo

Latitude: 46.944043

Date Taken: 10/2/2019

Longitude: -110.747294

Tags:



Description: Evening Star buildings prior to construction activities.

Category: Assessment

Latitude: 46.9441138888889

Date Taken: 10/2/2019

Longitude: -110.747375

Tags:



Description: Evening Star buildings prior to construction activities.

Category: Assessment

Latitude: 46.9443333333333

Date Taken: 10/2/2019

Longitude: -110.747536111111

Tags:



Evening Star Mine

Photo Log

Description: Evening Star buildings prior to construction activities.

Category: Assessment Latitude: 46.9443333333333

Date Taken: 10/2/2019 Longitude: -110.747536111111

Tags:



Description: Evening Star buildings prior to construction activities.

Category: Assessment Latitude: 46.9446944444444

Date Taken: 10/2/2019 Longitude: -110.747208333333

Tags:



Description: Drum contents requiring XRF screening.

Category: Assessment Latitude: 46.9441473888889

Date Taken: 10/4/2019 Longitude: -110.747396583333

Tags:



Description: Demolition progress.

Category: Removal Latitude: 46.9443382777778

Date Taken: 10/4/2019 Longitude: -110.747623611111

Tags:



Description: Excavator moving to top of hill for building demolition.

Category: Removal Latitude: 46.9440910833333

Date Taken: 10/4/2019 Longitude: -110.747391666667

Tags:



Evening Star Mine

Photo Log

Description: Demolition of wooden building.

Category: Removal

Latitude: 46.9446648611111

Date Taken: 10/4/2019

Longitude: -110.747494833333

Tags:



Description: Scrap metal pile for recycling.

Category: Removal

Latitude: 46.9444206111111

Date Taken: 10/4/2019

Longitude: -110.747693333333

Tags:



Description: Scrap metal pile for recycling. Demolition progress.

Category: Removal

Latitude: 46.9445914722222

Date Taken: 10/4/2019

Longitude: -110.747804305556

Tags:



Description: Demolition progress.

Category: Removal

Latitude: 46.9443304

Date Taken: 10/4/2019

Longitude: -110.7476145

Tags:



Description: Building demolition progress.

Category: Removal

Latitude: 46.9441730555556

Date Taken: 10/5/2019

Longitude: -110.746796444444

Tags:



Evening Star Mine

Photo Log

Description: Building demolition progress.

Category: Removal

Latitude: 46.9445013611111

Date Taken: 10/5/2019

Longitude: -110.747060833333

Tags:



Description: Drainage channel excavation progress.

Category: Removal

Latitude: 46.9440699555556

Date Taken: 10/5/2019

Longitude: -110.746640472222

Tags:



Description: Demolition progress.

Category: Removal

Latitude: 46.94388125

Date Taken: 10/5/2019

Longitude: -110.747363805556

Tags:



Description: Demolition progress.

Category: Removal

Latitude: 46.9441380833333

Date Taken: 10/5/2019

Longitude: -110.747705166667

Tags:



Description: Demolition progress.

Category: Removal

Latitude: 46.9440656805556

Date Taken: 10/6/2019

Longitude: -110.746911888889

Tags:



Evening Star Mine

Photo Log

Description: Demolition progress.

Category: Removal

Latitude: 46.9443326944444

Date Taken: 10/6/2019

Longitude: -110.746858305556

Tags:



Description: Excavation progress.

Category: Removal

Latitude: 46.9443244305556

Date Taken: 10/6/2019

Longitude: -110.746856555556

Tags:



Description: Drainage channel progress.

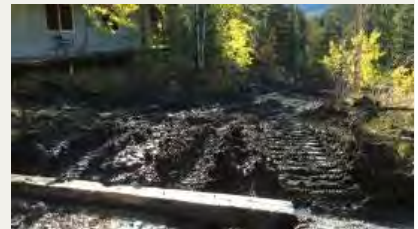
Category: Removal

Latitude: 46.9443049833333

Date Taken: 10/6/2019

Longitude: -110.74681725

Tags:



Description: Excavation of contaminated soils adjacent to Highway 89.

Category: Removal

Latitude: 46.9436593611111

Date Taken: 10/7/2019

Longitude: -110.746825972222

Tags:



Description: Excavation of contaminated soils adjacent to Highway 89.

Category: Removal

Latitude: 46.9438480444444

Date Taken: 10/7/2019

Longitude: -110.74725025

Tags:



Evening Star Mine

Photo Log

Description: Excavation work from top of hill.

Category: Removal

Latitude: 46.944365

Date Taken: 10/7/2019

Longitude: -110.7475805

Tags:



Description: Site progress. Crew loading out scrap metal for recycling.

Category: Removal

Latitude: 46.9441079722222

Date Taken: 10/7/2019

Longitude: -110.746743638889

Tags:



Description: Drainage channel construction progress. Installing native rock in lined drainage channel.

Category: Removal

Latitude: 46.9434919444444

Date Taken: 10/7/2019

Longitude: -110.745977722222

Tags:



Description: Construction and progress installing native rock in lined drainage channel.

Category: Removal

Latitude: 46.9438153888889

Date Taken: 10/8/2019

Longitude: -110.746344416667

Tags:



Description: Placing native rock in drainage channel.

Category: Removal

Latitude: 46.9437708055556

Date Taken: 10/8/2019

Longitude: -110.746342833333

Tags:



Evening Star Mine

Photo Log

Description: Completed section of drainage channel.

Category: Removal

Latitude: 46.9438002222222

Date Taken: 10/8/2019

Longitude: -110.746351388889

Tags:



Description: Excavation progress.

Category: Removal

Latitude: 46.9440092777778

Date Taken: 10/8/2019

Longitude: -110.747315388889

Tags:



Description: Excavation activity in the snow.

Category: Post-Removal

Latitude: 46.9439800555555

Date Taken: 10/9/2019

Longitude: -110.747481333333

Tags:



Description: Excavation progress with wood building debris burning in fire trench.

Category: Removal

Latitude: 46.9441299722222

Date Taken: 10/9/2019

Longitude: -110.746758319444

Tags:



Description: Catchment basin progress prior to liner installation.

Category: Removal

Latitude: 46.9441792222222

Date Taken: 10/9/2019

Longitude: -110.746587083333

Tags:



Evening Star Mine

Photo Log

Description: Catchment basin with vapor barrier liner installed.
Awaiting lime stone delivery and installation.

Category: Removal

Latitude: 46.9441271944444

Date Taken: 10/9/2019

Longitude: -110.746649944444

Tags:



Description: EPA OSC inspecting catchment basin, berm around catchment basin and mine adit discharge flow.

Category: Removal

Latitude: 46.9441083333333

Date Taken: 10/10/2019

Longitude: -110.746558333333

Tags:



Description: Excavation in area of demolished buildings.

Category: Removal

Latitude: 46.9445001666667

Date Taken: 10/10/2019

Longitude: -110.746907777778

Tags:



Description: Excavation of contaminated soils in area of demolished buildings.

Category: Removal

Latitude: 46.9440503333333

Date Taken: 10/10/2019

Longitude: -110.747333055556

Tags:



Description: Excavation of contaminated soils on hill slope.

Category: Removal

Latitude: 46.9441083333333

Date Taken: 10/11/2019

Longitude: -110.746558333333

Tags:



Evening Star Mine

Photo Log

Description: Sample area EM-01.

Category: Post-Removal

Latitude: 46.9441248888889

Date Taken: 10/12/2019

Longitude: -110.74696225

Tags:



Description: Sample area EM-02.

Category: Post-Removal

Latitude: 46.9442192777778

Date Taken: 10/12/2019

Longitude: -110.747168361111

Tags:



Description: Sample area EM-03.

Category: Post-Removal

Latitude: 46.9443209166667

Date Taken: 10/12/2019

Longitude: -110.747583527778

Tags:



Description: Sample area EM-04.

Category: Post-Removal

Latitude: 46.9444418194444

Date Taken: 10/12/2019

Longitude: -110.747275805556

Tags:



Description: Sample area EM-05.

Category: Post-Removal

Latitude: 46.9438176944444

Date Taken: 10/12/2019

Longitude: -110.746906416667

Tags:



Evening Star Mine

Photo Log

Description: Backfill material sample area.

Category: Post-Removal

Latitude: 46.9448278055556

Date Taken: 10/12/2019

Longitude: -110.747437583333

Tags:



Description: Sample area EM-07.

Category: Post-Removal

Latitude: 46.9444150277778

Date Taken: 10/12/2019

Longitude: -110.746901305556

Tags:



Description: Sample area EM-08.

Category: Post-Removal

Latitude: 46.9443970555556

Date Taken: 10/12/2019

Longitude: -110.746902333333

Tags:



Description: Sample are EM-09.

Category: Post-Removal

Latitude: 46.94432275

Date Taken: 10/12/2019

Longitude: -110.747129055556

Tags:



Description: Sample area EM-10.

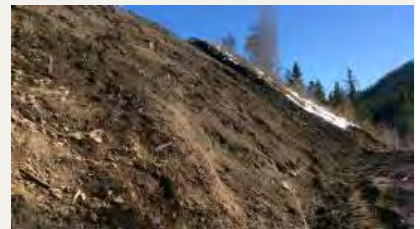
Category: Post-Removal

Latitude: 46.9442363888889

Date Taken: 10/12/2019

Longitude: -110.747079083333

Tags:



Evening Star Mine

Photo Log

Description: Backfill operations using excavator to place and compact soils on hill slope.

Category: Post-Removal Latitude: 46.9439163055556

Date Taken: 10/12/2019 Longitude: -110.747292083333

Tags:



Description: Backfill operations using excavator to place and compact soils on hill slope.

Category: Removal Latitude: 46.9445276388889

Date Taken: 10/13/2019 Longitude: -110.747769583333

Tags:



Description: Sample area EM-13.

Category: Post-Removal Latitude: 46.9435688888889

Date Taken: 10/14/2019 Longitude: -110.746167138889

Tags:

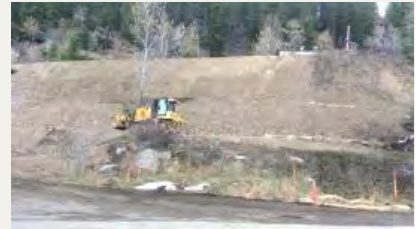


Description: Backfill and grading operations.

Category: Post-Removal Latitude: 46.9440065555556

Date Taken: 10/15/2019 Longitude: -110.747398611111

Tags:



Description: Offloading Enviroblend CS from shipping truck.

Category: Removal Latitude: 46.9438694611111

Date Taken: 10/17/2019 Longitude: -110.747357361111

Tags:



Evening Star Mine

Photo Log

Description: Imported top soil.

Category: Post-Removal

Latitude: 46.9443714444444

Date Taken: 10/16/2019

Longitude: -110.747505638889

Tags:



Description: Catchment basin with lime stone installed.

Category: Post-Removal

Latitude: 46.9440371388889

Date Taken: 10/17/2019

Longitude: -110.746692611111

Tags:



Description: Completed drainage channel, awaiting pathway grading under drier conditions.

Category: Post-Removal

Latitude: 46.9440693333333

Date Taken: 10/17/2019

Longitude: -110.74662975

Tags:



Description: Backfill material stock pile.

Category: Removal

Latitude: 46.9448951527778

Date Taken: 10/18/2019

Longitude: -110.747605222222

Tags:



Description: Excavator placing and compacting top soil on hill slope operations.

Category: Post-Removal

Latitude: 46.9439138888889

Date Taken: 10/18/2019

Longitude: -110.747322222222

Tags:



Evening Star Mine

Photo Log

Description: Placing erosion mat and seeding on slopes.

Category: Post-Removal

Latitude: 46.9438888888889

Date Taken: 10/18/2019

Longitude: -110.747322222222

Tags:



Description: Erosion mat and seeding operations progress.

Category: Post-Removal

Latitude: 46.9443666666667

Date Taken: 10/18/2019

Longitude: -110.747558333333

Tags:



Description: Importing of top soil.

Category: Post-Removal

Latitude: 46.9438673611111

Date Taken: 10/19/2019

Longitude: -110.747368694444

Tags:



Description: Completed grading of pathway along drainage channel.

Category: Post-Removal

Latitude: 46.9440954722222

Date Taken: 10/19/2019

Longitude: -110.74657575

Tags:



Description: Placing of erosion mat and seeding operation progress.

Category: Post-Removal

Latitude: 46.9441531944444

Date Taken: 10/19/2019

Longitude: -110.746694194444

Tags:



Evening Star Mine

Photo Log

Description: Preparing repository for mixing of EnviroBlend.

Category: Removal

Latitude: 46.9445113055556

Date Taken: 10/19/2019

Longitude: -110.747099388889

Tags:



Description: Placing top soil, seeding and erosion mat on top hill slope.

Category: Post-Removal

Latitude: 46.944566375

Date Taken: 10/20/2019

Longitude: -110.747104833333

Tags:



Description: Mixing of EnviroBlend with contaminated soils in repository.

Category: Removal

Latitude: 46.9445685555556

Date Taken: 10/20/2019

Longitude: -110.747087555556

Tags:



Description: Mixing EnviroBlend with contaminated soil in the repository.

Category: Removal

Latitude: 46.9445664166667

Date Taken: 10/20/2019

Longitude: -110.747159222222

Tags:



Description: Placing erosion mat and seeding operation progress. Mixing EnviroBlend into repository operations.

Category: Removal

Latitude: 46.9440218055556

Date Taken: 10/21/2019

Longitude: -110.746896444444

Tags:



Evening Star Mine

Photo Log

Description: Staging area.

Category: Post-Removal

Latitude: 46.9401821777778

Date Taken: 10/21/2019

Longitude: -110.74256225

Tags:



Description: Final Restoration - View from SH89

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Final Restoration - View from newly installed parking lot.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Final Restoration - View from SH89

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Final Restoration - Final Inspection

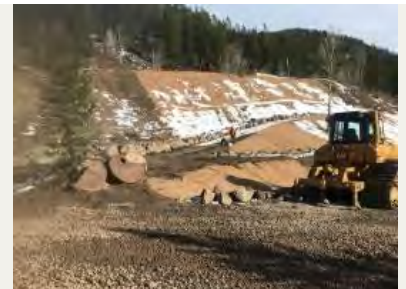
Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Evening Star Mine

Photo Log

Description: View of capped on-site Repository

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: View of capped repository

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Tailings removed on the steep slope

Category: Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Demolished historic structures burned in the fire pit

Category: Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Historic Structures demolition

Category: Removal

Latitude:

Date Taken:

Longitude:

Tags:



Evening Star Mine

Photo Log

Description: Historic Structures Demolition

Category: Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Erosion mat installation on the excavated slope

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Erosion Matt installed for erosion control.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Final Restoration - View from SH89

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: New gate installed at the entrance.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Compromise Shaft Mine

Photo Log

Description: Compromise mine site prior to construction activities.

Category: Assessment

Latitude: 46.9360512388889

Date Taken: 10/8/2019

Longitude: -110.735554983333

Tags:



Description: Compromise mine site prior to construction activities.

Category: Assessment

Latitude: 46.9360108388889

Date Taken: 10/8/2019

Longitude: -110.735448533333

Tags:



Description: Compromise mine site prior to construction activities.

Category: Assessment

Latitude: 46.9359246305556

Date Taken: 10/8/2019

Longitude: -110.735482061111

Tags:



Description: Compromise mine site prior to construction activities.

Category: Assessment

Latitude: 46.9363686222222

Date Taken: 10/8/2019

Longitude: -110.73492525

Tags:



Description: Compromise mine site prior to construction activities.

Category: Assessment

Latitude: 46.9362690444444

Date Taken: 10/8/2019

Longitude: -110.7353249

Tags:



Compromise Shaft Mine

Photo Log

Description: Existing drainage pathway prior to construction activities.

Category: Assessment

Latitude: 46.9360932777778

Date Taken: 10/8/2019

Longitude: -110.735409055556

Tags:



Description: Drainage pathway prior to construction activities.

Category: Assessment

Latitude: 46.9359370361111

Date Taken: 10/8/2019

Longitude: -110.735797975

Tags:



Description: Construction progress.

Category: Removal

Latitude: 46.9359517888889

Date Taken: 10/13/2019

Longitude: -110.735461527778

Tags:



Description: Inspection of liner installation and discuss plan for fence.

Category: Removal

Latitude: 46.9359517472222

Date Taken: 10/17/2019

Longitude: -110.7355347

Tags:



Description: Liner and channel progress.

Category: Removal

Latitude: 46.9361060555556

Date Taken: 10/17/2019

Longitude: -110.735461191667

Tags:



Compromise Shaft Mine

Photo Log

Description: Catchment basin with lime stone.

Category: Post-Removal

Latitude: 46.9359583333333

Date Taken: 10/18/2019

Longitude: -110.735541666667

Tags:



Description: Lime stone in catchment basin and channel.

Category: Post-Removal

Latitude: 46.9361194444444

Date Taken: 10/18/2019

Longitude: -110.735388888889

Tags:



Description: Channel drainage to wetland area.

Category: Post-Removal

Latitude: 46.9361333333333

Date Taken: 10/18/2019

Longitude: -110.735436111111

Tags:



Description: Up hill surface water diversion culvert, road and berm. Catchment basin lime stone can be seen.

Category: Post-Removal

Latitude: 46.9364777777778

Date Taken: 10/18/2019

Longitude: -110.734833333333

Tags:



Description: Access road to the Compromise Gulch restored and seeded.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Compromise Shaft Mine

Photo Log

Description: Catchment Basin lined with lime rocks - Final Restoration.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Final Restoration - New fence installed around the Compromise Shaft.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: New Fence installed around the shaft.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Road restored after the diversion channel installed.

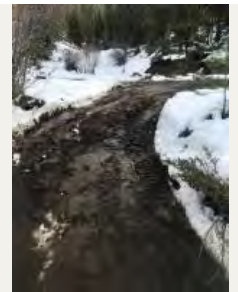
Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Description: Catchment Basin with lime rock to treat water coming from the shaft.

Category: Post-Removal

Latitude:

Date Taken:

Longitude:

Tags:



Attachment E

Laboratory Results for Removal Samples

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc.

Evening Star & Compromise Mine RV

SGS Job Number: DA20878

Sampling Date: 10/03/19

Report to:

Weston Solutions, Inc.
1435 Garrison Street Suite 100
Lakewood, CO 80215
michael.worden@westonsolutions.com; molly.patterson@westonsolutions.com
ATTN: Michael Worden

Total number of pages in report: **113**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Carissa Cumine 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), UT (NELAP CO00049)
LA (LA150028), TX (T104704511), WY (8TMS-L)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: DA20878

Evening Star & Compromise Mine RV

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
---------------	----------------	---------	----------	-------------	------	------------------

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

DA20878-1	10/03/19	13:05	MW	10/04/19	SO	Solid	EM-01-WD-10032019
-----------	----------	-------	----	----------	----	-------	-------------------

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Weston Solutions, Inc.

Job No DA20878

Site: Evening Star & Compromise Mine RV

Report Date 10/12/2019 11:57:24 A

1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 10/03/2019 and were received at SGS North America Inc - Orlando on 10/04/2019 properly preserved, at 3.9 Deg. C and intact. These Samples received an SGS Orlando job number of DA20878. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Semi-volatiles By Method SW846 8270C

Matrix: SO	Batch ID: OP18375
-------------------	--------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) DA20878-1MS, DA20878-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Nitroaniline, 4-Nitrophenol, Benzidine are outside control limits. Outside control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, 4-Nitrophenol, Benzidine are outside control limits. Probable cause is due to matrix interference.
- DA20878-1 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO	Batch ID: OP18377
-------------------	--------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- Sample(s) DA20878-1MS, DA20878-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals Analysis By Method SW846 6010C

Matrix: SO	Batch ID: F:MP36242
-------------------	----------------------------

- DA20878-1 for Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc: Analysis performed at SGS Orlando, FL.

General Chemistry By Method SM2540G-2011 M

Matrix: SO	Batch ID: GN48499
-------------------	--------------------------

- Sample(s) DA20901-1DUP were used as the QC samples for Solids, Percent.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS Wheat Ridge, CO

Job No: DA20878

Site: WESTCOL: Evening Star & Compromise Mine RS

Report Date: 10/11/2019 8:39:58 PM

1 Sample was collected on 10/03/2019 and were received at SGS North America Inc - Orlando on 10/04/2019 properly preserved, at 1.8 Deg. C and intact. These Samples received an SGS Orlando job number of DA20878. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP36242

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA68788-1DUP, FA68788-1MS, FA68788-1MSD, FA68788-1PS, FA68788-1SDL, FA68788-1DUP were used as the QC samples for metals.

Matrix Spike Recovery(s) for Calcium, Magnesium, Antimony are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Matrix Spike Duplicate Recovery(s) for Aluminum, Antimony, Calcium, Iron, Magnesium, Manganese, Vanadium are outside control limits. Probable cause is due to matrix interference.

RPD(s) for Duplicate for Aluminum, Antimony, Arsenic, Copper, Lead, Nickel, Sodium are outside control limits for sample MP36242-D1. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Antimony, Arsenic, Cobalt, Copper, Lead, Aluminum, Calcium are outside control limits for sample MP36242-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP36242-D1 for Copper: RPD acceptable due to low duplicate and sample concentrations.

MP36242-SD1 for Calcium: Serial dilution indicates possible matrix interference.

MP36242-D1 for Nickel: RPD acceptable due to low duplicate and sample concentrations.

MP36242-SD1 for Aluminum: Serial dilution indicates possible matrix interference.

MP36242-PS1 for Aluminum: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-PS1 for Iron: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-PS1 for Vanadium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-D1 for Antimony: RPD acceptable due to low duplicate and sample concentrations.

MP36242-D1 for Lead: RPD acceptable due to low duplicate and sample concentrations.

MP36242-PS1 for Selenium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-D1 for Sodium: RPD acceptable due to low duplicate and sample concentrations.

MP36242-PS1 for Lead: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-D1 for Arsenic: RPD acceptable due to low duplicate and sample concentrations.

MP36242-PS1 for Chromium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP36242-S1 for Antimony: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MP36242-PS1 for Calcium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Metals Analysis By Method SW846 7471B

Matrix: SO

Batch ID: MP36236

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA68729-1DUP, FA68729-1MS, FA68729-1MSD, FA68729-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP36236-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Jenna Kravitz, Client Services (Signature on File)

Summary of Hits

Job Number: DA20878
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/03/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

DA20878-1 EM-01-WD-10032019

Acenaphthylene	215 J	440	110	ug/kg	SW846 8270C
Benzo(a)anthracene	505	440	110	ug/kg	SW846 8270C
Benzo(b)fluoranthene	792	440	110	ug/kg	SW846 8270C
Benzo(g,h,i)perylene	308 J	440	110	ug/kg	SW846 8270C
Benzo(a)pyrene	274 J	440	110	ug/kg	SW846 8270C
Carbazole	174 J	440	110	ug/kg	SW846 8270C
Chrysene	958	440	110	ug/kg	SW846 8270C
Fluoranthene	974	440	110	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	386 J	440	110	ug/kg	SW846 8270C
Pyrene	701	440	110	ug/kg	SW846 8270C
Aluminum ^a	11.8	11		mg/kg	SW846 6010C
Antimony ^a	1.2	1.1		mg/kg	SW846 6010C
Barium ^a	11.4	11		mg/kg	SW846 6010C
Copper ^a	2.8	1.4		mg/kg	SW846 6010C
Iron ^a	69.4	16		mg/kg	SW846 6010C
Lead ^a	61.0	1.1		mg/kg	SW846 6010C
Manganese ^a	22.6	0.82		mg/kg	SW846 6010C
Zinc ^a	17.2	1.1		mg/kg	SW846 6010C

(a) Analysis performed at SGS Orlando, FL.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 3

Client Sample ID:	EM-01-WD-10032019	Date Sampled:	10/03/19
Lab Sample ID:	DA20878-1	Date Received:	10/04/19
Matrix:	SO - Solid	Percent Solids:	90.4
Method:	SW846 8270C SW846 3546		
Project:	Evening Star & Compromise Mine RV		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G144975.D	1	10/07/19 16:03	LT	10/07/19	OP18375	E1G2572
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.0 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	4400	3300	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	440	110	ug/kg	
95-57-8	2-Chlorophenol	ND	440	110	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	440	110	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	440	110	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2200	1700	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	ND	2200	1700	ug/kg	
95-48-7	2-Methylphenol	ND	440	110	ug/kg	
106-44-5	4-Methylphenol	ND	440	110	ug/kg	
88-75-5	2-Nitrophenol	ND	440	110	ug/kg	
100-02-7	4-Nitrophenol	ND	2200	1700	ug/kg	
87-86-5	Pentachlorophenol	ND	440	110	ug/kg	
108-95-2	Phenol	ND	440	110	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	440	110	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	440	110	ug/kg	
83-32-9	Acenaphthene	ND	440	110	ug/kg	
208-96-8	Acenaphthylene	215	440	110	ug/kg	J
62-53-3	Aniline	ND	1700	440	ug/kg	
120-12-7	Anthracene	ND	440	110	ug/kg	
92-87-5	Benzidine	ND	5500	4400	ug/kg	
56-55-3	Benzo(a)anthracene	505	440	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	792	440	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	440	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	308	440	110	ug/kg	J
50-32-8	Benzo(a)pyrene	274	440	110	ug/kg	J
100-51-6	Benzyl Alcohol	ND	440	110	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	440	110	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	440	140	ug/kg	
86-74-8	Carbazole	174	440	110	ug/kg	J
106-47-8	4-Chloroaniline	ND	440	110	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	440	110	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	440	110	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EM-01-WD-10032019	Date Sampled:	10/03/19
Lab Sample ID:	DA20878-1	Date Received:	10/04/19
Matrix:	SO - Solid	Percent Solids:	90.4
Method:	SW846 8270C SW846 3546		
Project:	Evening Star & Compromise Mine RV		

ABN Full List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	440	110	ug/kg	
91-58-7	2-Chloronaphthalene	ND	440	110	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	440	110	ug/kg	
218-01-9	Chrysene	958	440	110	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	440	110	ug/kg	
132-64-9	Dibenzofuran	ND	440	110	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	440	110	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	440	110	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	440	110	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	440	110	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	440	110	ug/kg	
84-66-2	Diethyl phthalate	ND	440	110	ug/kg	
131-11-3	Dimethyl phthalate	ND	440	110	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	440	220	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	440	220	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1100	220	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	440	110	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1100	240	ug/kg	
206-44-0	Fluoranthene	974	440	110	ug/kg	
86-73-7	Fluorene	ND	440	110	ug/kg	
118-74-1	Hexachlorobenzene	ND	440	110	ug/kg	
87-68-3	Hexachlorobutadiene	ND	440	110	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	440	110	ug/kg	
67-72-1	Hexachloroethane	ND	440	310	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	386	440	110	ug/kg	J
78-59-1	Isophorone	ND	440	110	ug/kg	
90-12-0	1-Methylnaphthalene	ND	440	150	ug/kg	
91-57-6	2-Methylnaphthalene	ND	440	200	ug/kg	
91-20-3	Naphthalene	ND	440	150	ug/kg	
88-74-4	2-Nitroaniline	ND	440	110	ug/kg	
99-09-2	3-Nitroaniline	ND	440	110	ug/kg	
100-01-6	4-Nitroaniline	ND	440	110	ug/kg	
98-95-3	Nitrobenzene	ND	440	110	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	440	220	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	440	110	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	440	130	ug/kg	
85-01-8	Phenanthrene	ND	440	110	ug/kg	
129-00-0	Pyrene	701	440	110	ug/kg	
110-86-1	Pyridine	ND	440	110	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	440	110	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: EM-01-WD-10032019 Lab Sample ID: DA20878-1 Matrix: SO - Solid Method: SW846 8270C SW846 3546 Project: Evening Star & Compromise Mine RV	Date Sampled: 10/03/19 Date Received: 10/04/19 Percent Solids: 90.4
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ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	68%		23-130%
367-12-4	2-Fluorophenol	65%		10-130%
4165-60-0	Nitrobenzene-d5	63%		12-131%
4165-62-2	Phenol-d5	65%		17-130%
1718-51-0	Terphenyl-d14	80%		29-141%
118-79-6	2,4,6-Tribromophenol	88%		25-130%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID:	EM-01-WD-10032019	Date Sampled:	10/03/19
Lab Sample ID:	DA20878-1	Date Received:	10/04/19
Matrix:	SO - Solid	Percent Solids:	90.4
Method:	SW846 8082A SW846 3546		
Project:	Evening Star & Compromise Mine RV		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EI8369.D	1	10/08/19 02:26	GN	10/07/19	OP18377	GEI431
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	5.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	110	44	ug/kg	
11104-28-2	Aroclor 1221	ND	110	44	ug/kg	
11141-16-5	Aroclor 1232	ND	110	44	ug/kg	
53469-21-9	Aroclor 1242	ND	110	44	ug/kg	
12672-29-6	Aroclor 1248	ND	110	44	ug/kg	
11097-69-1	Aroclor 1254	ND	110	46	ug/kg	
11096-82-5	Aroclor 1260	ND	110	44	ug/kg	
37324-23-5	Aroclor 1262	ND	110	44	ug/kg	
11100-14-4	Aroclor 1268	ND	110	33	ug/kg	
1336-36-3	Total PCBs	ND	110	46	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	63%		10-149%
877-09-8	Tetrachloro-m-xylene	87%		10-149%
2051-24-3	Decachlorobiphenyl	121%		11-162%
2051-24-3	Decachlorobiphenyl	97%		11-162%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EM-01-WD-10032019	Date Sampled:	10/03/19
Lab Sample ID:	DA20878-1	Date Received:	10/04/19
Matrix:	SO - Solid	Percent Solids:	90.4
Project:	Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum ^a	11.8	11	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Antimony ^a	1.2	1.1	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Arsenic ^a	< 0.55	0.55	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Barium ^a	11.4	11	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Beryllium ^a	< 0.27	0.27	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Cadmium ^a	< 0.22	0.22	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Calcium ^a	< 270	270	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 0.55	0.55	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Cobalt ^a	< 2.7	2.7	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Copper ^a	2.8	1.4	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Iron ^a	69.4	16	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Lead ^a	61.0	1.1	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Magnesium ^a	< 270	270	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Manganese ^a	22.6	0.82	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Mercury ^a	< 0.045	0.045	mg/kg	1	10/10/19	10/10/19	AFL SW846 7471B ¹	SW846 7471B ³
Nickel ^a	< 2.2	2.2	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Potassium ^a	< 550	550	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Selenium ^a	< 1.1	1.1	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Silver ^a	< 0.55	0.55	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Sodium ^a	< 550	550	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Thallium ^a	< 0.55	0.55	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Vanadium ^a	< 2.7	2.7	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴
Zinc ^a	17.2	1.1	mg/kg	1	10/10/19	10/11/19	AFL SW846 6010C ²	SW846 3050B ⁴

(1) Instrument QC Batch: F:MA16239

(2) Instrument QC Batch: F:MA16244

(3) Prep QC Batch: F:MP36236

(4) Prep QC Batch: F:MP36242

(a) Analysis performed at SGS Orlando, FL.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS Accutest Sample Receipt Summary

Job Number: DA20878

Client: WESTON SOLUTIONS, INC.

Project: EVENING STAR AND COMPROMISE MINE RV

Date / Time Received: 10/4/2019 8:45:00 AM

Delivery Method:

Airbill #'s: FedEx

Cooler Temps (Initial/Adjusted): #1: (3.9/3.9):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun; | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

DA20878: Chain of Custody

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MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MB	1G144967.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	4000	3000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	400	100	ug/kg	
95-57-8	2-Chlorophenol	ND	400	100	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	400	100	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	400	100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2000	1500	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	2000	1500	ug/kg	
95-48-7	2-Methylphenol	ND	400	100	ug/kg	
106-44-5	4-Methylphenol	ND	400	100	ug/kg	
88-75-5	2-Nitrophenol	ND	400	100	ug/kg	
100-02-7	4-Nitrophenol	ND	2000	1500	ug/kg	
87-86-5	Pentachlorophenol	ND	400	100	ug/kg	
108-95-2	Phenol	ND	400	100	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	400	100	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	400	100	ug/kg	
83-32-9	Acenaphthene	ND	400	100	ug/kg	
208-96-8	Acenaphthylene	ND	400	100	ug/kg	
62-53-3	Aniline	ND	1500	400	ug/kg	
120-12-7	Anthracene	ND	400	100	ug/kg	
92-87-5	Benzidine	ND	5000	4000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	400	100	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	400	100	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	400	100	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	400	100	ug/kg	
50-32-8	Benzo(a)pyrene	ND	400	100	ug/kg	
100-51-6	Benzyl Alcohol	ND	400	100	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	400	100	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	400	120	ug/kg	
86-74-8	Carbazole	ND	400	100	ug/kg	
106-47-8	4-Chloroaniline	ND	400	100	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	400	100	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	400	100	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	400	100	ug/kg	
91-58-7	2-Chloronaphthalene	ND	400	100	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	400	100	ug/kg	
218-01-9	Chrysene	ND	400	100	ug/kg	

Method Blank Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MB	1G144967.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	400	100	ug/kg	
132-64-9	Dibenzofuran	ND	400	100	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	100	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	400	100	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	400	100	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	400	100	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	400	100	ug/kg	
84-66-2	Diethyl phthalate	ND	400	100	ug/kg	
131-11-3	Dimethyl phthalate	ND	400	100	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	400	200	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	400	200	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1000	200	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	400	100	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1000	220	ug/kg	
206-44-0	Fluoranthene	ND	400	100	ug/kg	
86-73-7	Fluorene	ND	400	100	ug/kg	
118-74-1	Hexachlorobenzene	ND	400	100	ug/kg	
87-68-3	Hexachlorobutadiene	ND	400	100	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	400	100	ug/kg	
67-72-1	Hexachloroethane	ND	400	280	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	400	100	ug/kg	
78-59-1	Isophorone	ND	400	100	ug/kg	
90-12-0	1-Methylnaphthalene	ND	400	140	ug/kg	
91-57-6	2-Methylnaphthalene	ND	400	180	ug/kg	
91-20-3	Naphthalene	ND	400	140	ug/kg	
88-74-4	2-Nitroaniline	ND	400	100	ug/kg	
99-09-2	3-Nitroaniline	ND	400	100	ug/kg	
100-01-6	4-Nitroaniline	ND	400	100	ug/kg	
98-95-3	Nitrobenzene	ND	400	100	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	400	200	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	400	100	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	400	120	ug/kg	
85-01-8	Phenanthrene	ND	400	100	ug/kg	
129-00-0	Pyrene	ND	400	100	ug/kg	
110-86-1	Pyridine	ND	400	100	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	400	100	ug/kg	

Method Blank Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MB	1G144967.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Surrogate Recoveries	Limits
321-60-8	2-Fluorobiphenyl	75% 23-130%
367-12-4	2-Fluorophenol	73% 10-130%
4165-60-0	Nitrobenzene-d5	74% 12-131%
4165-62-2	Phenol-d5	77% 17-130%
1718-51-0	Terphenyl-d14	96% 29-141%
118-79-6	2,4,6-Tribromophenol	84% 25-130%

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Blank Spike Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-BS	1G144968.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	10000	7270	73	10-151
59-50-7	4-Chloro-3-methyl phenol	10000	9520	95	63-130
95-57-8	2-Chlorophenol	10000	8010	80	44-130
120-83-2	2,4-Dichlorophenol	10000	8690	87	55-130
105-67-9	2,4-Dimethylphenol	10000	8050	81	52-130
534-52-1	4,6-Dinitro-o-cresol	10000	12300	123	48-150
51-28-5	2,4-Dinitrophenol	10000	11600	116	38-144
95-48-7	2-Methylphenol	10000	8120	81	46-130
106-44-5	4-Methylphenol	10000	8210	82	49-130
88-75-5	2-Nitrophenol	10000	8950	90	53-130
100-02-7	4-Nitrophenol	10000	8300	83	56-139
87-86-5	Pentachlorophenol	10000	11500	115	59-130
108-95-2	Phenol	10000	8010	80	48-130
95-95-4	2,4,5-Trichlorophenol	10000	10100	101	63-130
88-06-2	2,4,6-Trichlorophenol	10000	10200	102	61-130
83-32-9	Acenaphthene	10000	8850	89	55-130
208-96-8	Acenaphthylene	10000	8660	87	55-130
62-53-3	Aniline	10000	7370	74	46-130
120-12-7	Anthracene	10000	9480	95	70-130
92-87-5	Benzidine	10000	8730	87	10-165
56-55-3	Benzo(a)anthracene	10000	10500	105	70-130
205-99-2	Benzo(b)fluoranthene	10000	9660	97	70-130
207-08-9	Benzo(k)fluoranthene	10000	10100	101	70-130
191-24-2	Benzo(g,h,i)perylene	10000	10100	101	70-130
50-32-8	Benzo(a)pyrene	10000	9350	94	70-130
100-51-6	Benzyl Alcohol	10000	7360	74	38-146
101-55-3	4-Bromophenyl phenyl ether	10000	9450	95	67-130
85-68-7	Butyl benzyl phthalate	10000	10100	101	70-130
86-74-8	Carbazole	10000	9780	98	70-130
106-47-8	4-Chloroaniline	10000	7260	73	45-130
111-91-1	bis(2-Chloroethoxy)methane	10000	8030	80	50-130
111-44-4	bis(2-Chloroethyl)ether	10000	7820	78	41-130
108-60-1	2,2'-Oxybis(1-chloropropane)	10000	6610	66	41-134
91-58-7	2-Chloronaphthalene	10000	8490	85	55-130
7005-72-3	4-Chlorophenyl phenyl ether	10000	9420	94	61-130
218-01-9	Chrysene	10000	10200	102	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-BS	1G144968.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	10000	10100	101	70-130
132-64-9	Dibenzofuran	10000	8870	89	59-130
84-74-2	Di-n-butyl phthalate	10000	10200	102	70-130
95-50-1	1,2-Dichlorobenzene	10000	7370	74	39-130
541-73-1	1,3-Dichlorobenzene	10000	7250	73	38-130
106-46-7	1,4-Dichlorobenzene	10000	7250	73	38-130
91-94-1	3,3'-Dichlorobenzidine	10000	7800	78	47-130
84-66-2	Diethyl phthalate	10000	9580	96	70-130
131-11-3	Dimethyl phthalate	10000	9540	95	65-130
121-14-2	2,4-Dinitrotoluene	10000	10400	104	70-130
606-20-2	2,6-Dinitrotoluene	10000	9730	97	67-130
117-84-0	Di-n-octyl phthalate	10000	10000	100	70-133
122-66-7	1,2-Diphenylhydrazine	10000	8910	89	59-133
117-81-7	bis(2-Ethylhexyl)phthalate	10000	10300	103	70-130
206-44-0	Fluoranthene	10000	10200	102	70-130
86-73-7	Fluorene	10000	8970	90	62-130
118-74-1	Hexachlorobenzene	10000	9780	98	66-130
87-68-3	Hexachlorobutadiene	10000	8370	84	43-130
77-47-4	Hexachlorocyclopentadiene	10000	9190	92	35-130
67-72-1	Hexachloroethane	10000	7480	75	40-130
193-39-5	Indeno(1,2,3-cd)pyrene	10000	9630	96	70-130
78-59-1	Isophorone	10000	8230	82	54-130
90-12-0	1-Methylnaphthalene	10000	8220	82	47-130
91-57-6	2-Methylnaphthalene	10000	8390	84	46-130
91-20-3	Naphthalene	10000	7890	79	45-130
88-74-4	2-Nitroaniline	10000	9710	97	65-130
99-09-2	3-Nitroaniline	10000	8390	84	65-130
100-01-6	4-Nitroaniline	10000	9500	95	70-130
98-95-3	Nitrobenzene	10000	8320	83	48-130
62-75-9	N-Nitrosodimethylamine	10000	7500	75	36-130
86-30-6	N-Nitrosodiphenylamine	10000	9260	93	70-130
621-64-7	N-Nitroso-di-n-propylamine	10000	7780	78	47-130
85-01-8	Phenanthrene	10000	9370	94	70-130
129-00-0	Pyrene	10000	9860	99	70-130
110-86-1	Pyridine	10000	5810	58	19-130
120-82-1	1,2,4-Trichlorobenzene	10000	8100	81	47-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-BS	1G144968.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Surrogate Recoveries	BSP	Limits
321-60-8	2-Fluorobiphenyl	79%	23-130%
367-12-4	2-Fluorophenol	75%	10-130%
4165-60-0	Nitrobenzene-d5	75%	12-131%
4165-62-2	Phenol-d5	77%	17-130%
1718-51-0	Terphenyl-d14	105%	29-141%
118-79-6	2,4,6-Tribromophenol	99%	25-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MS	1G144976.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
OP18375-MSD	1G144977.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
DA20878-1	1G144975.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	DA20878-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
65-85-0	Benzoic Acid	ND		11100	11700	106	11100	12000	108	3	10-151/30
59-50-7	4-Chloro-3-methyl phenol	ND		11100	9140	83	11100	9460	86	3	10-188/30
95-57-8	2-Chlorophenol	ND		11100	6860	62	11100	7410	67	8	10-144/30
120-83-2	2,4-Dichlorophenol	ND		11100	7610	69	11100	7970	72	5	10-168/30
105-67-9	2,4-Dimethylphenol	ND		11100	7400	67	11100	7660	69	3	10-161/30
534-52-1	4,6-Dinitro-o-cresol	ND		11100	10500	95	11100	10700	97	2	10-131/30
51-28-5	2,4-Dinitrophenol	ND		11100	10800	98	11100	11000	99	2	10-130/30
95-48-7	2-Methylphenol	ND		11100	7300	66	11100	7930	72	8	10-149/30
106-44-5	4-Methylphenol	ND		11100	7900	71	11100	8500	77	7	10-167/30
88-75-5	2-Nitrophenol	ND		11100	8100	73	11100	8590	78	6	10-186/30
100-02-7	4-Nitrophenol	ND		11100	ND	7* a	11100	ND	4* a	nc	26-136/30
87-86-5	Pentachlorophenol	ND		11100	12400	112	11100	13100	118	5	10-139/30
108-95-2	Phenol	ND		11100	6760	61	11100	7220	65	7	10-142/30
95-95-4	2,4,5-Trichlorophenol	ND		11100	9520	86	11100	10100	91	6	24-132/30
88-06-2	2,4,6-Trichlorophenol	ND		11100	9380	85	11100	10400	94	10	10-169/30
83-32-9	Acenaphthene	ND		11100	8060	73	11100	8590	78	6	10-167/30
208-96-8	Acenaphthylene	215	J	11100	7790	68	11100	8360	74	7	10-167/30
62-53-3	Aniline	ND		11100	3140	28	11100	3230	29	3	23-130/30
120-12-7	Anthracene	ND		11100	8300	75	11100	8780	79	6	22-143/30
92-87-5	Benzo(d)pyrene	ND		11100	ND	0* a	11100	ND	0* a	nc	10-165/30
56-55-3	Benzo(a)anthracene	505		11100	8780	75	11100	9370	80	7	15-152/30
205-99-2	Benzo(b)fluoranthene	792		11100	8600	71	11100	9000	74	5	17-155/30
207-08-9	Benzo(k)fluoranthene	ND		11100	8190	74	11100	9180	83	11	10-172/30
191-24-2	Benzo(g,h,i)perylene	308	J	11100	8340	73	11100	9040	79	8	10-153/30
50-32-8	Benzo(a)pyrene	274	J	11100	7790	68	11100	8490	74	9	19-151/30
100-51-6	Benzyl Alcohol	ND		11100	7330	66	11100	7830	71	7	10-200/30
101-55-3	4-Bromophenyl phenyl ether	ND		11100	8480	77	11100	9030	82	6	43-132/30
85-68-7	Butyl benzyl phthalate	ND		11100	8750	79	11100	9430	85	7	52-141/30
86-74-8	Carbazole	174	J	11100	8200	73	11100	8740	77	6	50-200/30
106-47-8	4-Chloroaniline	ND		11100	1230	11	11100	960	9* a	25	10-176/30
111-91-1	bis(2-Chloroethoxy)methane	ND		11100	6780	61	11100	7080	64	4	10-157/30
111-44-4	bis(2-Chloroethyl)ether	ND		11100	7420	67	11100	7720	70	4	10-142/30
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		11100	5780	52	11100	6140	56	6	18-132/30
91-58-7	2-Chloronaphthalene	ND		11100	7700	70	11100	8160	74	6	22-133/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		11100	7990	72	11100	8700	79	9	40-130/30
218-01-9	Chrysene	958		11100	8730	70	11100	9500	77	8	21-147/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MS	1G144976.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
OP18375-MSD	1G144977.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
DA20878-1	1G144975.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Compound	DA20878-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
53-70-3	Dibenzo(a,h)anthracene	ND		11100	8170	74	11100	8990	81	10	16-152/30
132-64-9	Dibenzofuran	ND		11100	7770	70	11100	8460	76	9	10-166/30
84-74-2	Di-n-butyl phthalate	ND		11100	8560	77	11100	9140	83	7	59-130/30
95-50-1	1,2-Dichlorobenzene	ND		11100	6410	58	11100	6790	61	6	14-130/30
541-73-1	1,3-Dichlorobenzene	ND		11100	6350	57	11100	6650	60	5	12-130/30
106-46-7	1,4-Dichlorobenzene	ND		11100	6350	57	11100	6650	60	5	15-130/30
91-94-1	3,3'-Dichlorobenzidine	ND		11100	ND	0* a	11100	ND	0* a	nc	10-157/30
84-66-2	Diethyl phthalate	ND		11100	8250	75	11100	8940	81	8	43-132/30
131-11-3	Dimethyl phthalate	ND		11100	8330	75	11100	8890	80	7	33-138/30
121-14-2	2,4-Dinitrotoluene	ND		11100	8630	78	11100	9340	84	8	10-200/30
606-20-2	2,6-Dinitrotoluene	ND		11100	8410	76	11100	8970	81	6	12-164/30
117-84-0	Di-n-octyl phthalate	ND		11100	9100	82	11100	9970	90	9	57-135/30
122-66-7	1,2-Diphenylhydrazine	ND		11100	8060	73	11100	8720	79	8	53-133/30
117-81-7	bis(2-Ethylhexyl)phthalate	ND		11100	9190	83	11100	9750	88	6	56-138/30
206-44-0	Fluoranthene	974		11100	8350	67	11100	9200	74	10	14-151/30
86-73-7	Fluorene	ND		11100	7860	71	11100	8450	76	7	10-196/30
118-74-1	Hexachlorobenzene	ND		11100	8650	78	11100	9130	83	5	31-138/30
87-68-3	Hexachlorobutadiene	ND		11100	6950	63	11100	7410	67	6	15-134/30
77-47-4	Hexachlorocyclopentadiene	ND		11100	7690	70	11100	8390	76	9	10-130/30
67-72-1	Hexachloroethane	ND		11100	6630	60	11100	7430	67	11	10-196/30
193-39-5	Indeno(1,2,3-cd)pyrene	386	J	11100	8320	72	11100	8970	78	8	15-153/30
78-59-1	Isophorone	ND		11100	6850	62	11100	7200	65	5	29-130/30
90-12-0	1-Methylnaphthalene	ND		11100	7090	64	11100	7320	66	3	10-199/30
91-57-6	2-Methylnaphthalene	ND		11100	7060	64	11100	7330	66	4	10-188/30
91-20-3	Naphthalene	ND		11100	6650	60	11100	6880	62	3	10-194/30
88-74-4	2-Nitroaniline	ND		11100	9060	82	11100	9670	87	7	14-162/30
99-09-2	3-Nitroaniline	ND		11100	1200	11* a	11100	1110	10* a	8	29-135/30
100-01-6	4-Nitroaniline	ND		11100	705	6* a	11100	613	6* a	14	17-162/30
98-95-3	Nitrobenzene	ND		11100	6880	62	11100	7130	64	4	10-200/30
62-75-9	N-Nitrosodimethylamine	ND		11100	6290	57	11100	6740	61	7	30-130/30
86-30-6	N-Nitrosodiphenylamine	ND		11100	8170	74	11100	8750	79	7	10-147/30
621-64-7	N-Nitroso-di-n-propylamine	ND		11100	6800	61	11100	7400	67	8	10-147/30
85-01-8	Phenanthrene	ND		11100	8270	75	11100	8760	79	6	22-144/30
129-00-0	Pyrene	701		11100	8450	70	11100	9080	76	7	16-152/30
110-86-1	Pyridine	ND		11100	3460	31	11100	3900	35	12	19-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		11100	6770	61	11100	7130	64	5	17-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18375-MS	1G144976.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
OP18375-MSD	1G144977.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572
DA20878-1	1G144975.D	1	10/07/19	LT	10/07/19	OP18375	E1G2572

The QC reported here applies to the following samples:

Method: SW846 8270C

DA20878-1

CAS No.	Surrogate Recoveries	MS	MSD	DA20878-1	Limits
321-60-8	2-Fluorobiphenyl	63%	68%	68%	23-130%
367-12-4	2-Fluorophenol	54%	60%	65%	10-130%
4165-60-0	Nitrobenzene-d5	55%	58%	63%	12-131%
4165-62-2	Phenol-d5	58%	62%	65%	17-130%
1718-51-0	Terphenyl-d14	79%	84%	80%	29-141%
118-79-6	2,4,6-Tribromophenol	86%	94%	88%	25-130%

(a) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

MS Semi-volatiles

Raw Data

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E1G2572\
 Data File : 1g144975.D
 Acq On : 7 Oct 2019 4:03 pm
 Operator : LINDSEYT
 Sample : DA20878-1
 Misc : OP18375,E1G2572,5,,,1,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 08 11:57:04 2019
 Quant Method : C:\msdchem\1\METHODS\bnaelg2562.M
 Quant Title : 8270C Calibration
 QLast Update : Fri Oct 04 13:08:36 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.174	152	38588	40.0000	ppm	0.00
23) Naphthalene-d8	6.096	136	146287	40.0000	ppm	0.00
40) Acenaphthene-d10	7.418	164	76387	40.0000	ppm	-0.02
62) Phenanthrene-d10	8.886	188	153051	40.0000	ppm	-0.02
78) Chrysene-d12	12.822	240	139098	40.0000	ppm	-0.02
87) Perylene-d12	15.172	264	124071	40.0000	ppm	-0.01

System Monitoring Compounds

4) 2-Fluorophenol	4.216	112	37703	32.4216	ppm	0.00
Spiked Amount	50.000	Range	1 - 250	Recovery	=	64.84%
6) Phenol-d5	4.898	99	49917	32.4153	ppm	-0.01
Spiked Amount	50.000	Range	1 - 250	Recovery	=	64.84%
24) Nitrobenzene-d5	5.573	82	53317	31.5845	ppm	0.00
Spiked Amount	50.000	Range	1 - 250	Recovery	=	63.16%
45) 2-Fluorobiphenyl	6.865	172	118783	34.1472	ppm	-0.02
Spiked Amount	50.000	Range	1 - 250	Recovery	=	68.30%
64) 2,4,6-Tribromophenol	8.128	330	17095	43.7530	ppm	-0.02
Spiked Amount	50.000	Range	1 - 250	Recovery	=	87.50%
81) Terphenyl-d14	11.113	244	146725	39.7888	ppm	-0.02
Spiked Amount	50.000	Range	1 - 250	Recovery	=	79.58%

Target Compounds

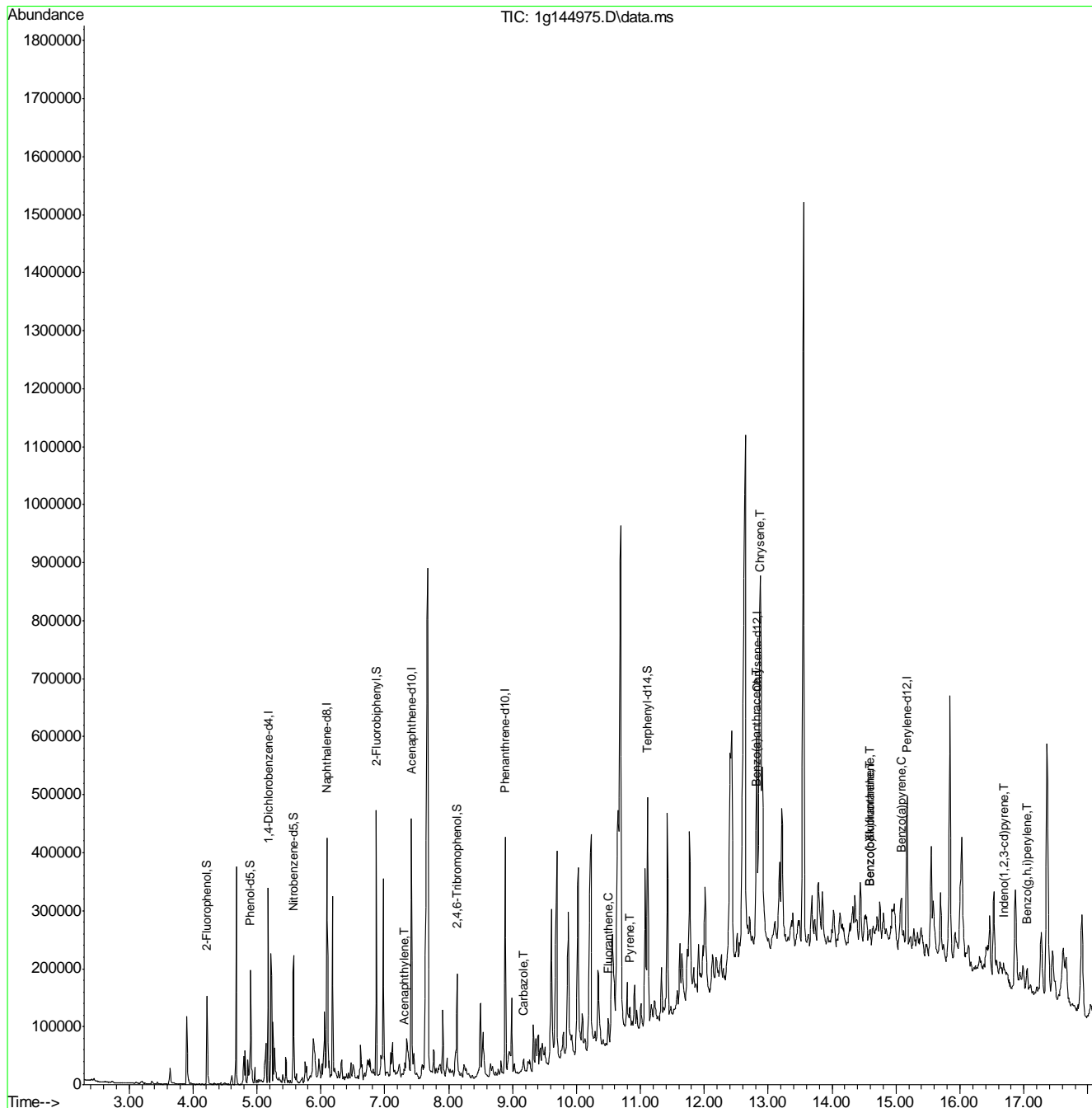
						Qvalue
50) Acenaphthylene	7.300	152	3932	0.9704	ppm #	62
75) Carbazole	9.162	167	3051	0.7887	ppm #	56
77) Fluoranthene	10.496	202	22387	4.4025	ppm	95
80) Pyrene	10.831	202	15600	3.1685	ppm	97
84) Benzo(a)anthracene	12.804	228	10062	2.2809	ppm	87
85) Chrysene	12.863	228	19090	4.3317	ppm	87
89) Benzo(b)fluoranthene	14.584	252	15064	3.5803	ppm	96
91) Benzo(b&k)fluoranthene	14.584	252	21076	5.0474	ppm	87
92) Benzo(a)pyrene	15.084	252	4919	1.2401	ppm #	74
93) Indeno(1,2,3-cd)pyrene	16.682	276	6010	1.7454	ppm	92
95) Benzo(g,h,i)perylene	17.052	276	4941	1.3924	ppm	81

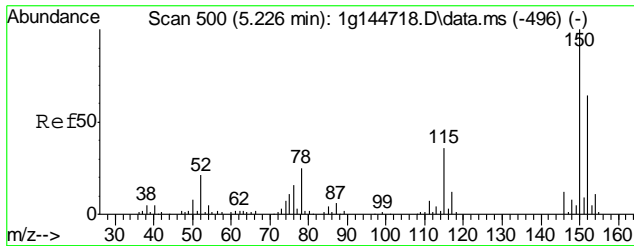
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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 Acq On : 7 Oct 2019 4:03 pm
 Operator : LINDSEYT
 Sample : DA20878-1
 Misc : OP18375,E1G2572,5,,1,1
 ALS Vial : 14 Sample Multiplier: 1

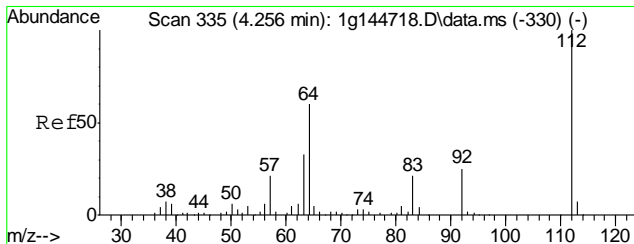
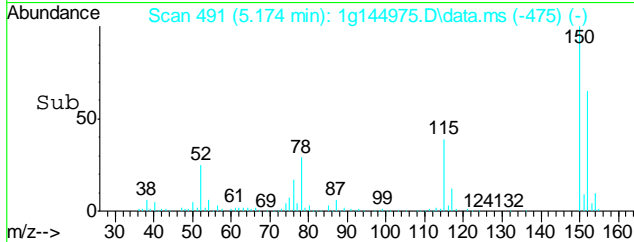
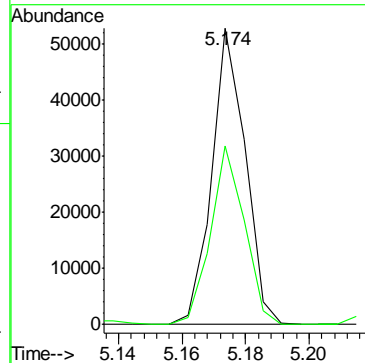
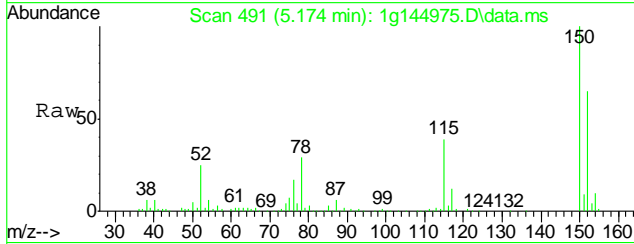
Quant Time: Oct 08 11:57:04 2019
 Quant Method : C:\msdchem\1\METHODS\bnaelg2562.M
 Quant Title : 8270C Calibration
 QLast Update : Fri Oct 04 13:08:36 2019
 Response via : Initial Calibration





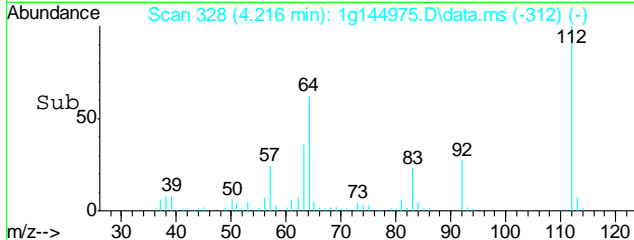
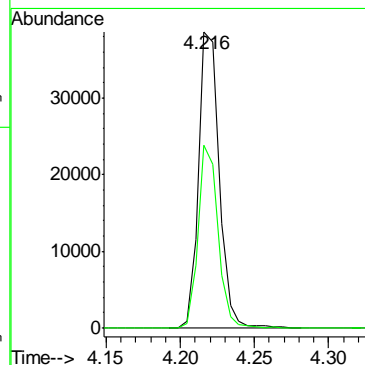
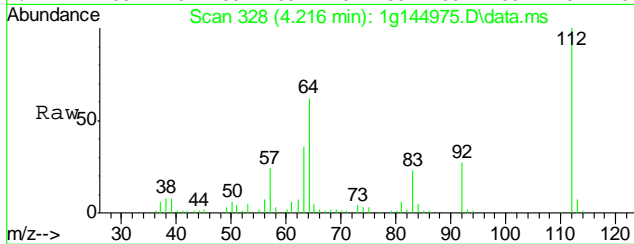
#1
 1,4-Dichlorobenzene-d4
 Concen: 40.0000 ppm
 RT: 5.174 min Scan# 491
 Delta R.T. -0.005 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
152	38588		
152	100		
115	60.9	38.9	78.9

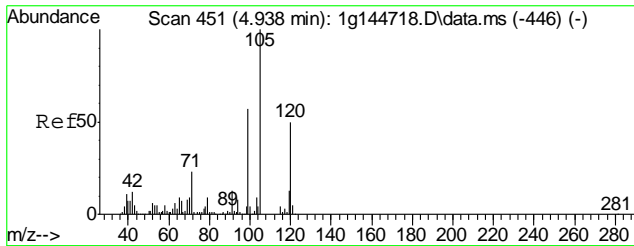


#4
 2-Fluorophenol
 Concen: 32.4216 ppm
 RT: 4.216 min Scan# 328
 Delta R.T. -0.005 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
112	37703		
112	100		
64	59.5	40.0	80.0

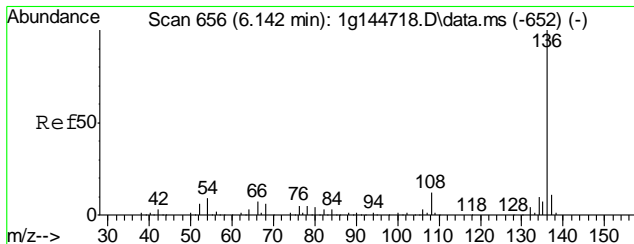
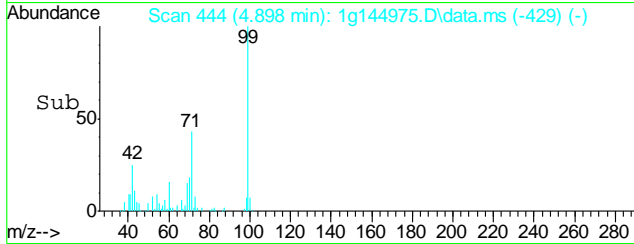
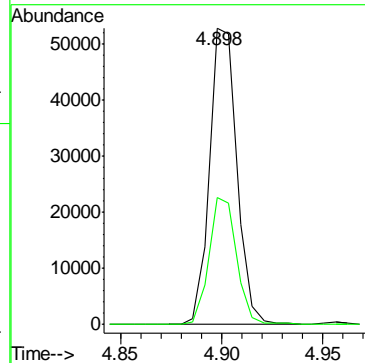
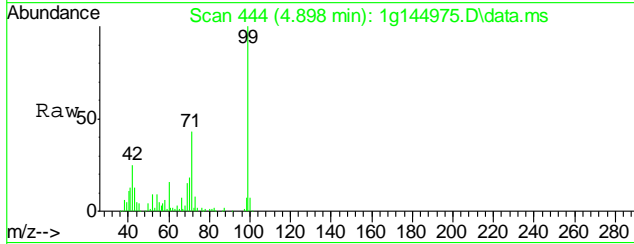


7.1.1
7



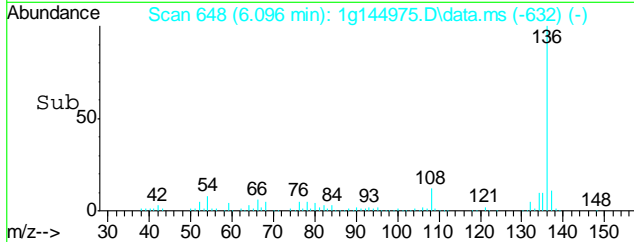
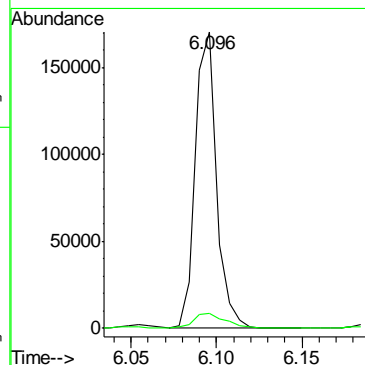
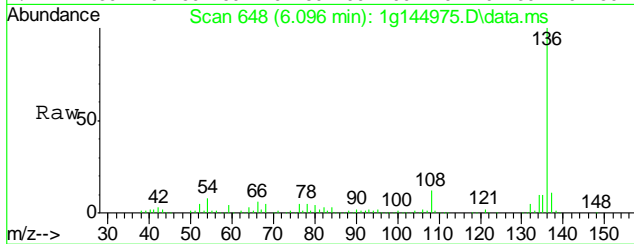
#6
 Phenol-d5
 Concen: 32.4153 ppm
 RT: 4.898 min Scan# 444
 Delta R.T. -0.011 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

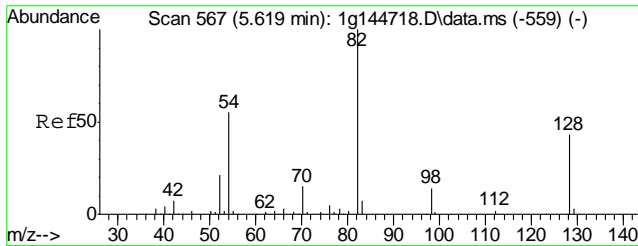
Tgt Ion: 99 Resp: 49917
 Ion Ratio Lower Upper
 99 100
 71 43.0 20.0 60.0



#23
 Naphthalene-d8
 Concen: 40.0000 ppm
 RT: 6.096 min Scan# 648
 Delta R.T. -0.005 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

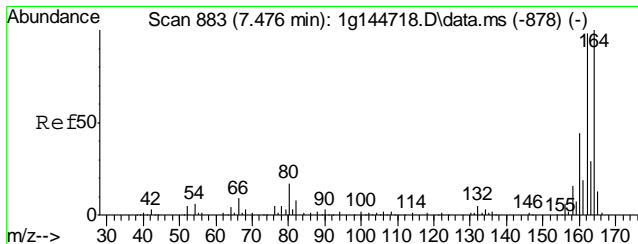
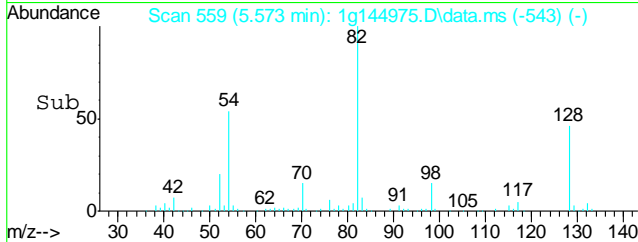
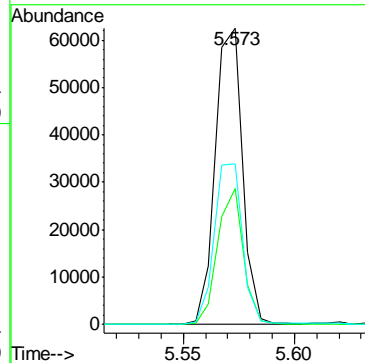
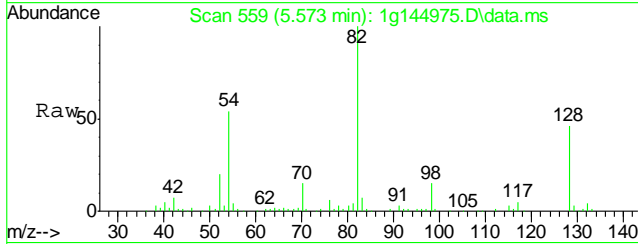
Tgt Ion: 136 Resp: 146287
 Ion Ratio Lower Upper
 136 100
 68 7.1 0.0 25.3





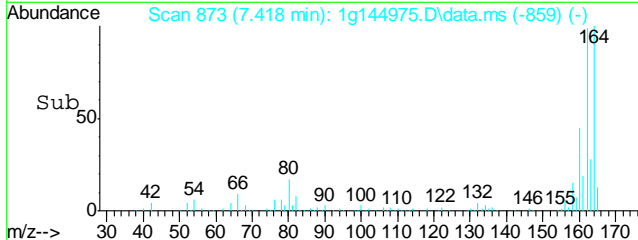
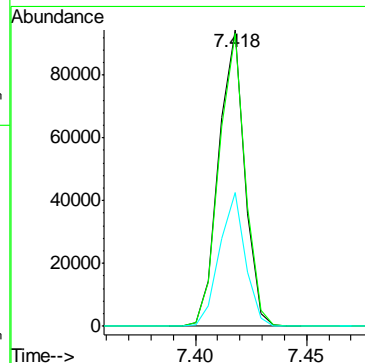
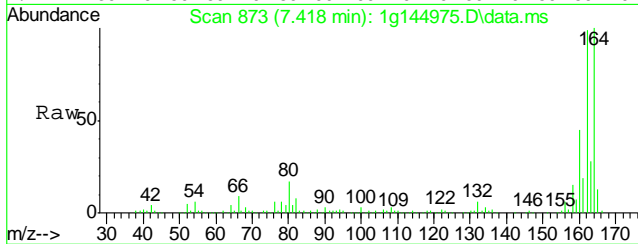
#24
 Nitrobenzene-d5
 Concen: 31.5845 ppm
 RT: 5.573 min Scan# 559
 Delta R.T. -0.005 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

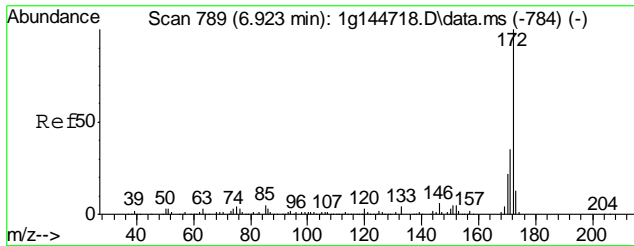
Tgt Ion	Resp	Lower	Upper
82	53317	100	
128	43.0	20.0	60.0
54	56.4	29.7	69.7



#40
 Acenaphthene-d10
 Concen: 40.0000 ppm
 RT: 7.418 min Scan# 873
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

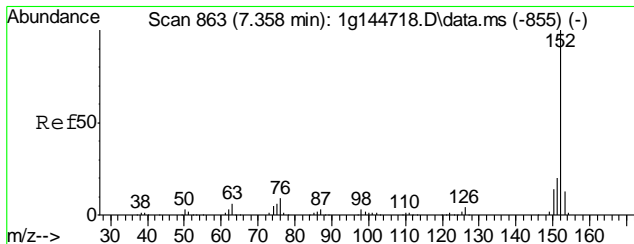
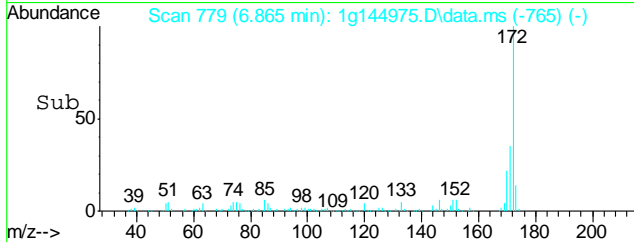
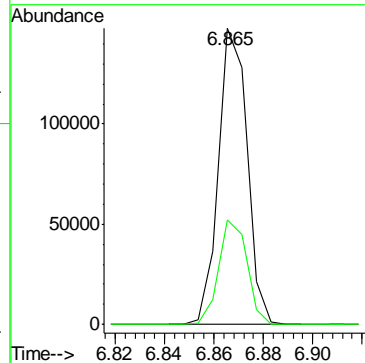
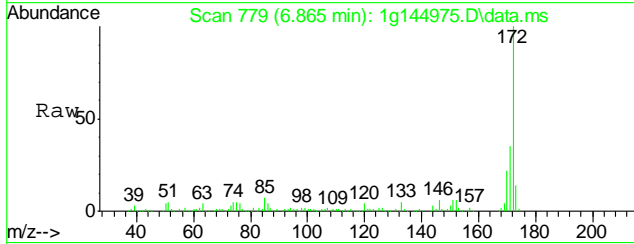
Tgt Ion	Resp	Lower	Upper
164	76387	100	
162	99.3	79.1	119.1
160	45.3	24.1	64.1





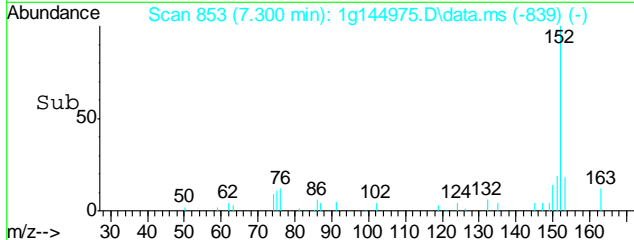
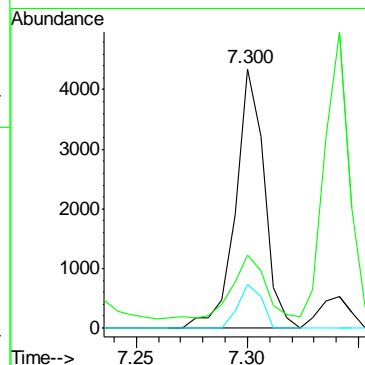
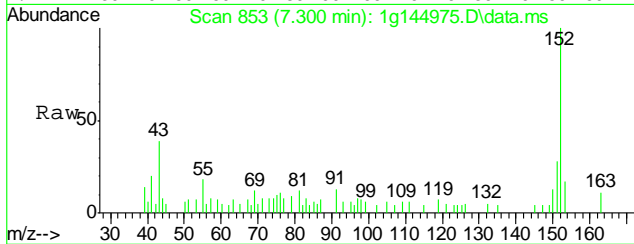
#45
 2-Fluorobiphenyl
 Concen: 34.1472 ppm
 RT: 6.865 min Scan# 779
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion:172 Resp: 118783
 Ion Ratio Lower Upper
 172 100
 171 35.0 14.9 54.9

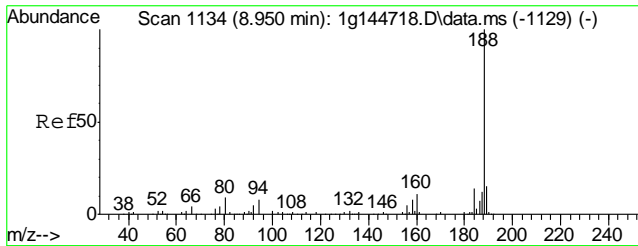


#50
 Acenaphthylene
 Concen: 0.9704 ppm
 RT: 7.300 min Scan# 853
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion:152 Resp: 3932
 Ion Ratio Lower Upper
 152 100
 151 39.3 0.1 40.1
 153 0.0 0.0 33.2

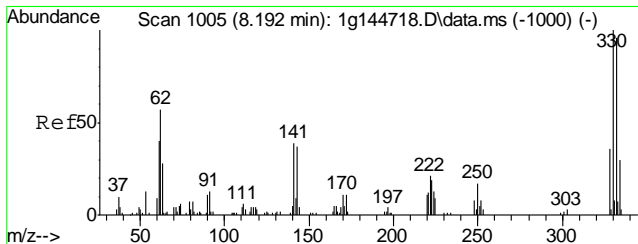
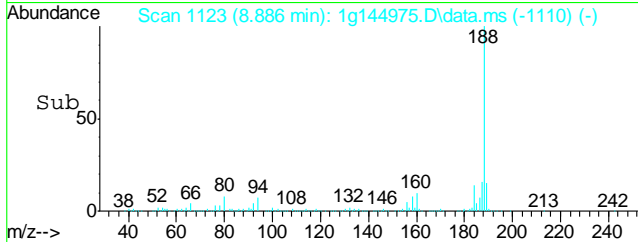
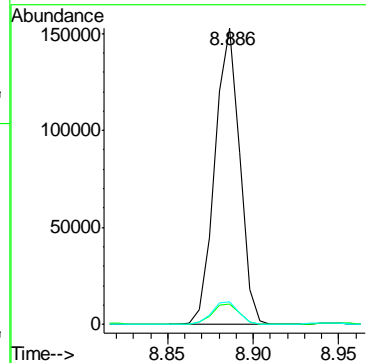
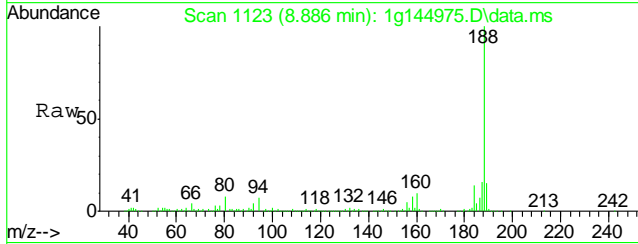


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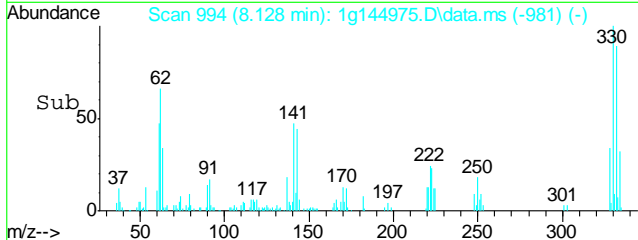
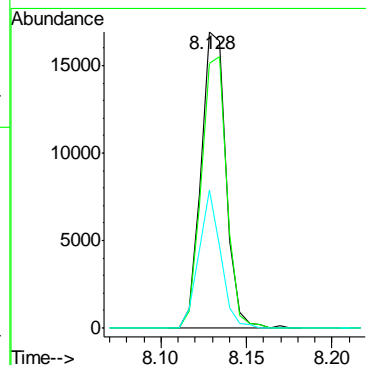
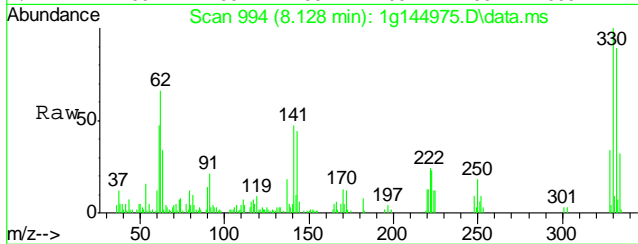
#62
 Phenanthrene-d10
 Concen: 40.0000 ppm
 RT: 8.886 min Scan# 1123
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

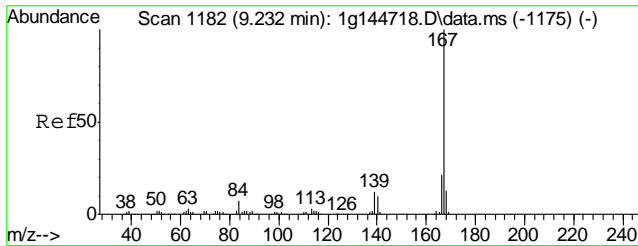
Tgt Ion	Ratio	Lower	Upper
188	100		
94	7.6	0.0	28.0
80	8.2	0.0	28.9



#64
 2,4,6-Tribromophenol
 Concen: 43.7530 ppm
 RT: 8.128 min Scan# 994
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

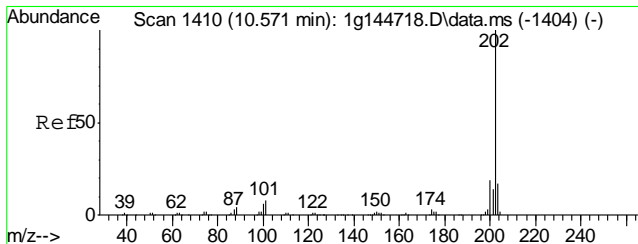
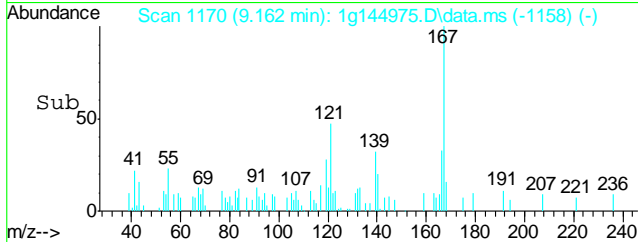
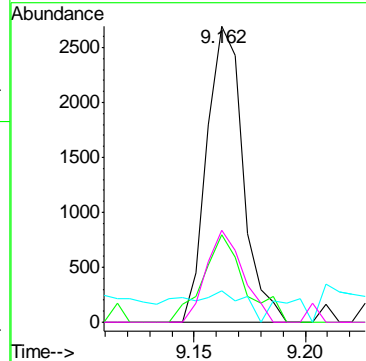
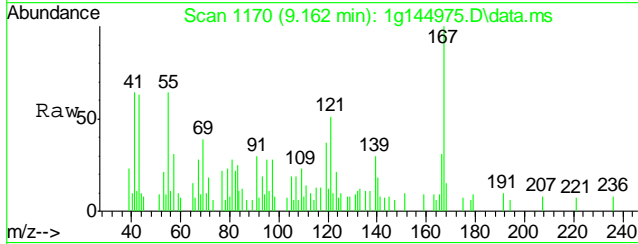
Tgt Ion	Ratio	Lower	Upper
330	100		
332	92.8	78.0	117.0
141	40.5	32.4	48.6





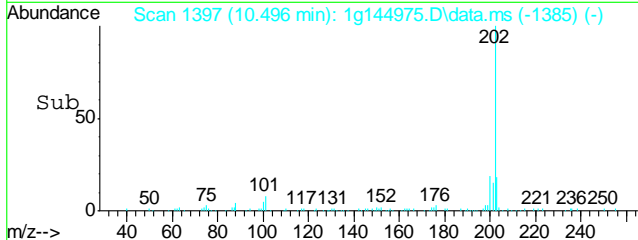
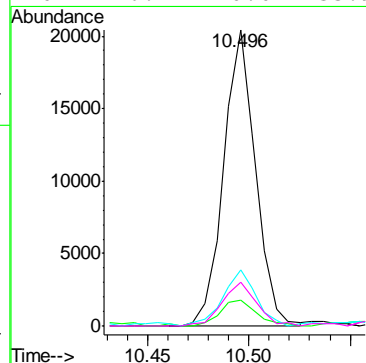
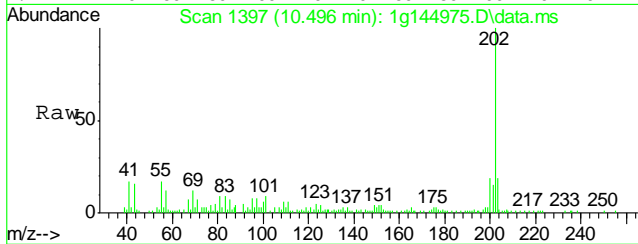
#75
 Carbazole
 Concen: 0.7887 ppm
 RT: 9.162 min Scan# 1170
 Delta R.T. -0.028 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Ratio	Lower	Upper
167	100		
139	34.2	0.0	32.0#
84	0.0	0.0	27.0
166	0.0	0.7	40.7#

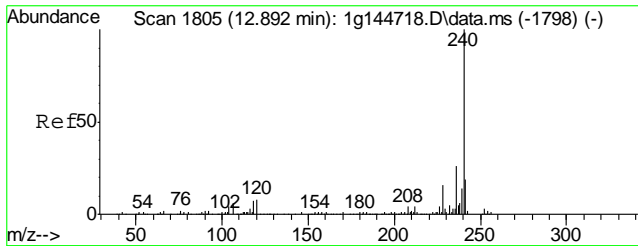


#77
 Fluoranthene
 Concen: 4.4025 ppm
 RT: 10.496 min Scan# 1397
 Delta R.T. -0.028 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Ratio	Lower	Upper
202	100		
101	10.1	0.0	28.4
203	19.6	0.0	37.2
201	16.2	0.0	33.9

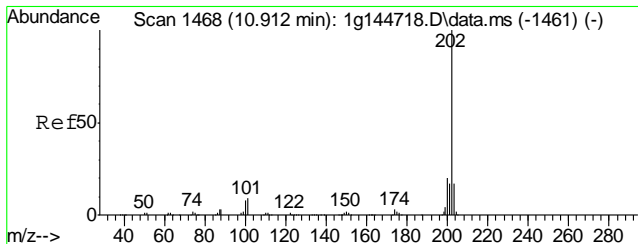
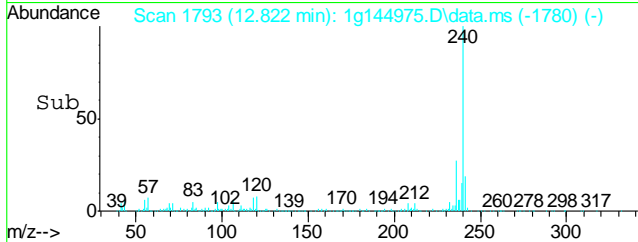
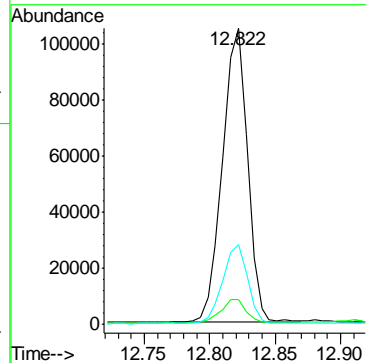
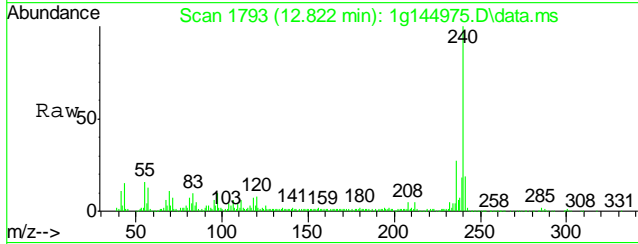


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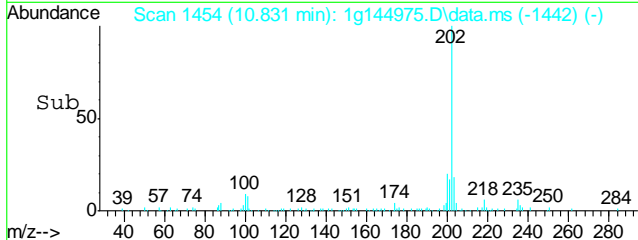
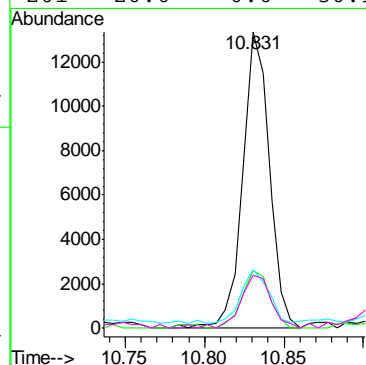
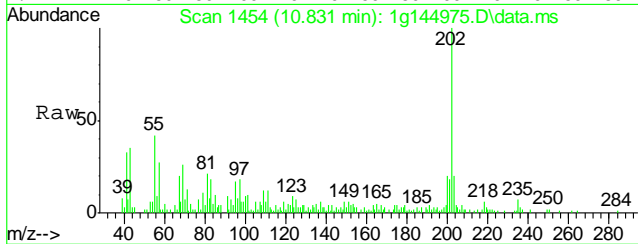
#78
 Chrysene-d12
 Concen: 40.0000 ppm
 RT: 12.822 min Scan# 1793
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Ratio	Lower	Upper
240	100		
120	8.2	0.0	28.3
236	26.8	6.0	46.0

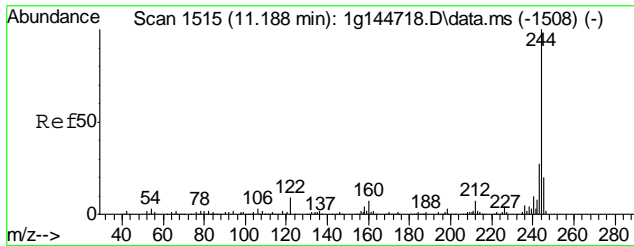


#80
 Pyrene
 Concen: 3.1685 ppm
 RT: 10.831 min Scan# 1454
 Delta R.T. -0.028 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	39.4
203	18.4	0.0	37.9
201	20.0	0.0	36.9

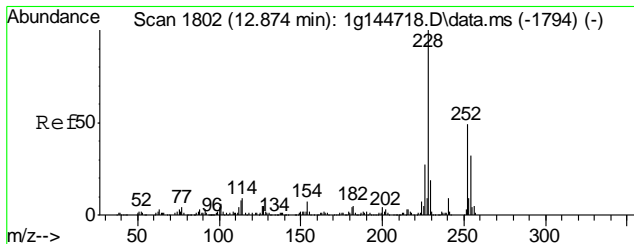
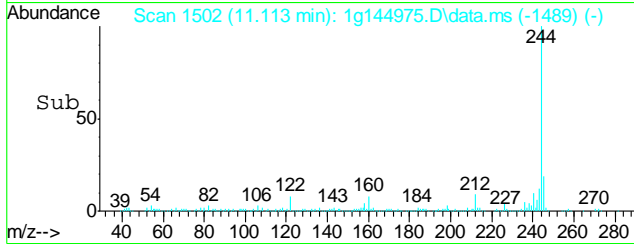
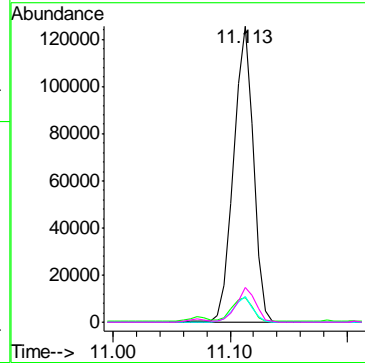
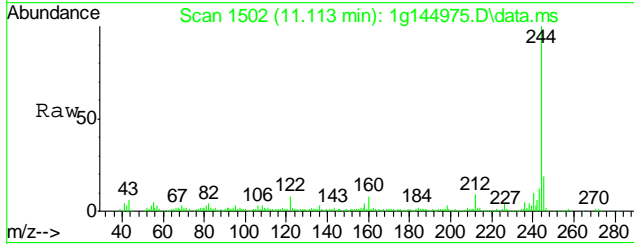


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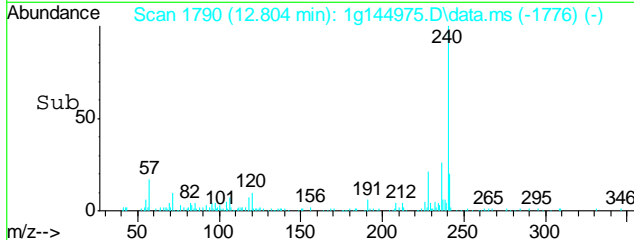
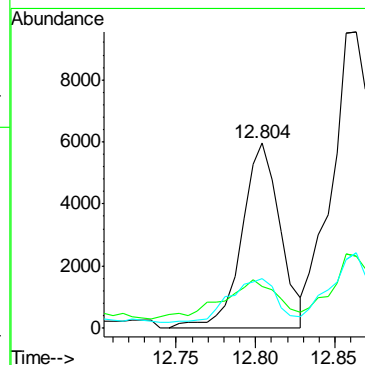
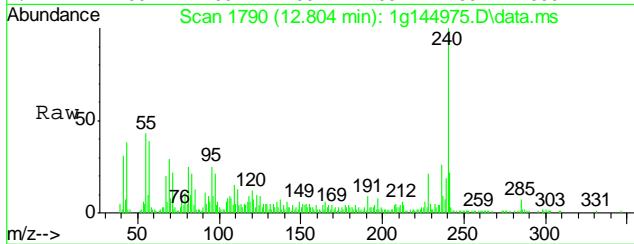
#81
 Terphenyl-d14
 Concen: 39.7888 ppm
 RT: 11.113 min Scan# 1502
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

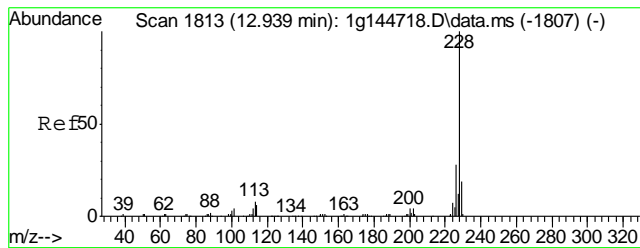
Tgt Ion	244		
Resp	146725		
Ion Ratio	100		
Lower	0.0		
Upper	28.7		
122	8.5	0.0	28.7
212	8.3	0.0	27.7
243	11.4	5.2	45.2



#84
 Benzo(a)anthracene
 Concen: 2.2809 ppm
 RT: 12.804 min Scan# 1790
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

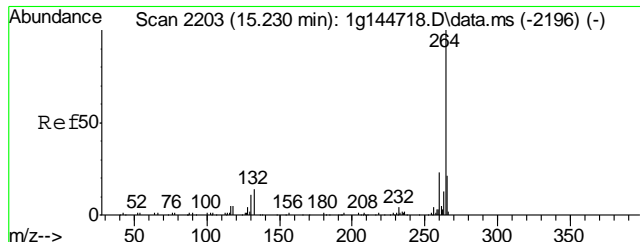
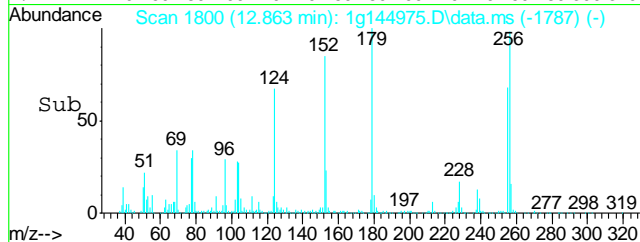
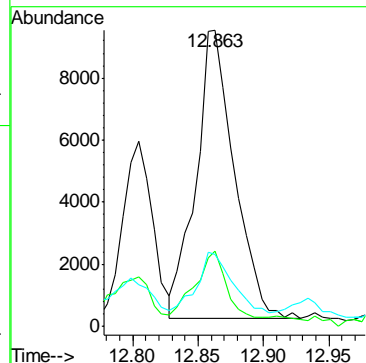
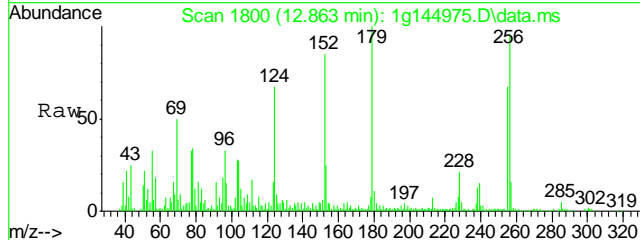
Tgt Ion	228		
Resp	10062		
Ion Ratio	100		
Lower	0.0		
Upper	39.2		
229	29.7	0.0	39.2
226	29.7	6.5	46.5





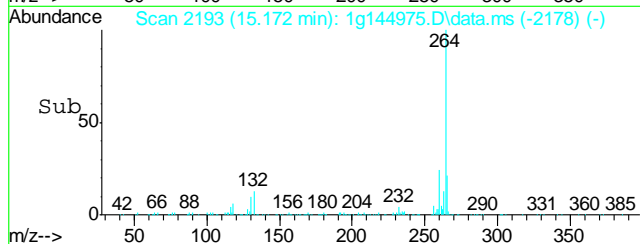
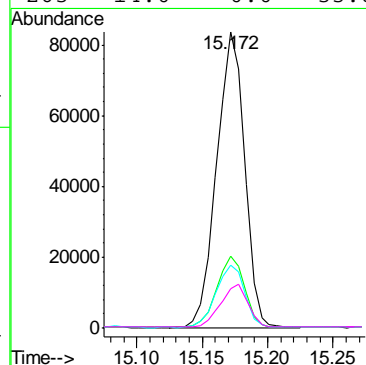
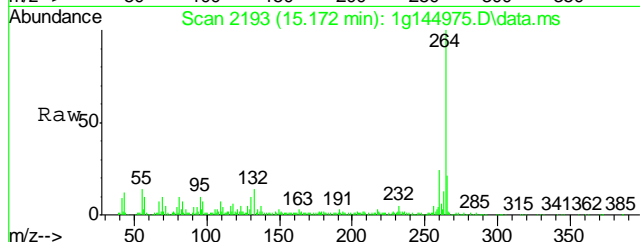
#85
 Chrysene
 Concen: 4.3317 ppm
 RT: 12.863 min Scan# 1800
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
228	19090	100	
226	17.7	8.5	48.5
229	18.9	0.0	39.4

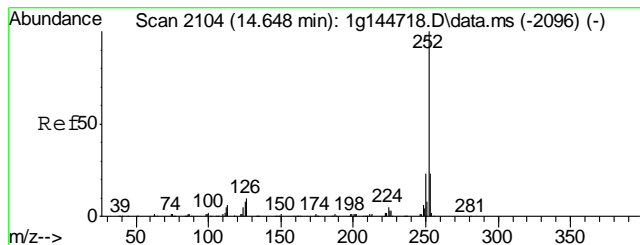


#87
 Perylene-d12
 Concen: 40.0000 ppm
 RT: 15.172 min Scan# 2193
 Delta R.T. -0.011 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
264	124071	100	
260	23.4	2.8	42.8
265	21.4	1.2	41.2
263	14.0	0.0	33.8

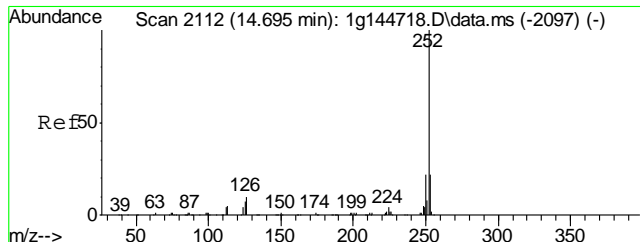
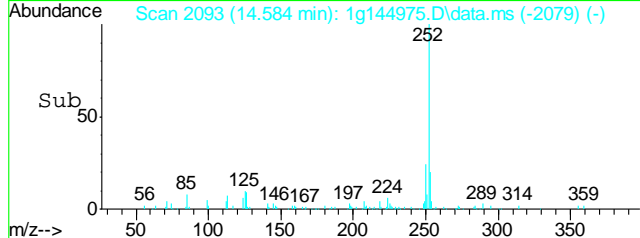
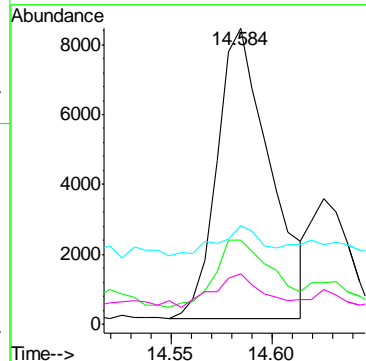
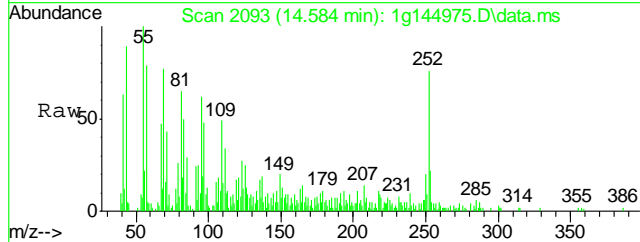


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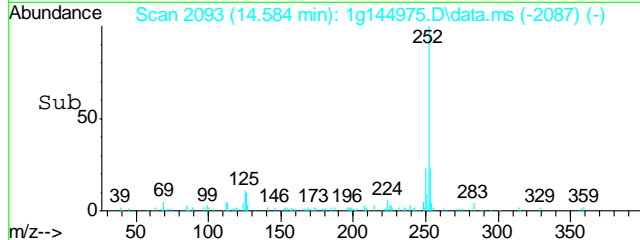
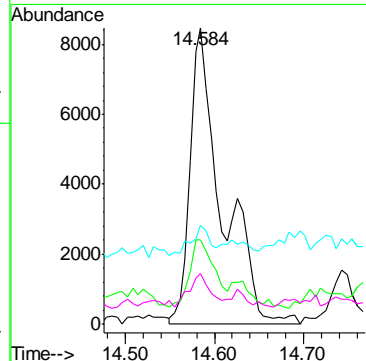
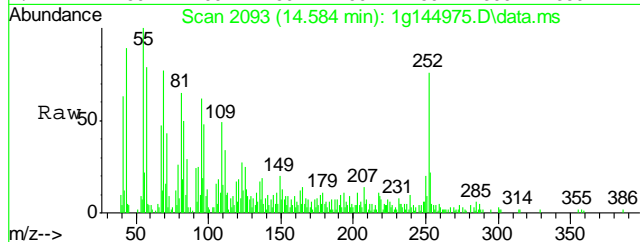
#89
 Benzo(b)fluoranthene
 Concen: 3.5803 ppm
 RT: 14.584 min Scan# 2093
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
252	15064	100	
253	25.2	2.1	42.1
125	8.4	0.0	27.7
126	10.4	0.0	29.8



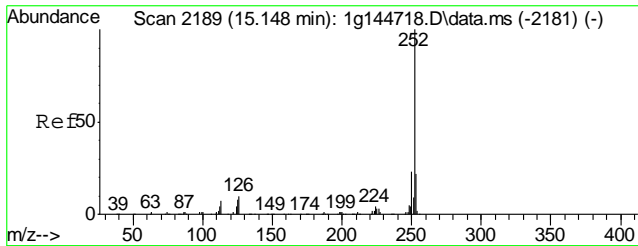
#91
 Benzo(b&k)fluoranthene
 Concen: 5.0474 ppm
 RT: 14.584 min Scan# 2093
 Delta R.T. -0.063 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
252	21076	100	
253	18.0	0.0	30.8
125	6.0	0.0	23.7
126	7.4	0.0	25.5



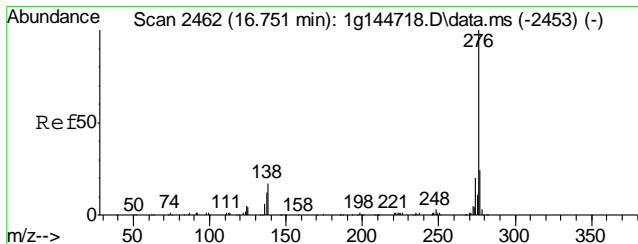
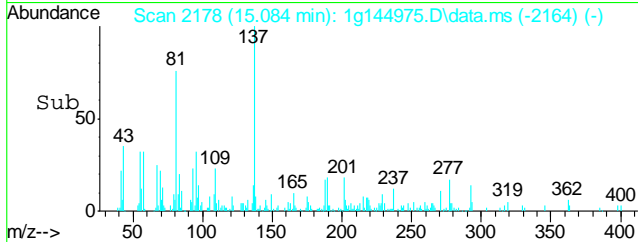
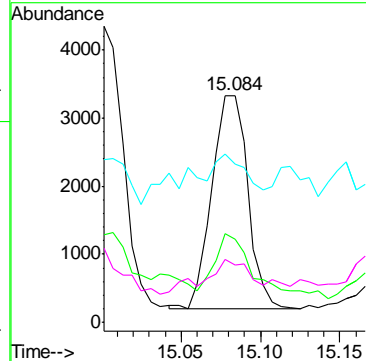
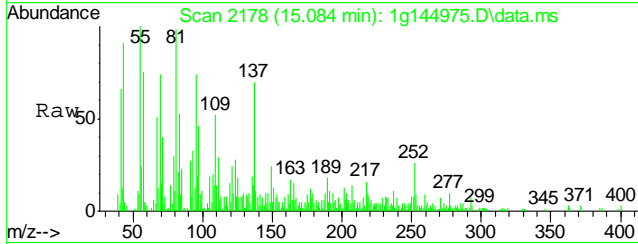
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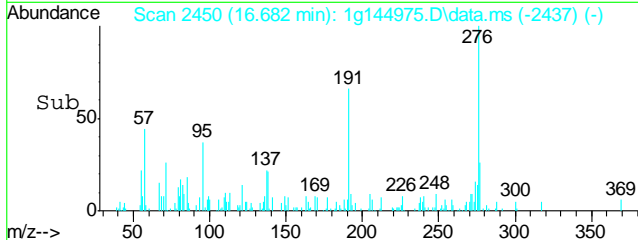
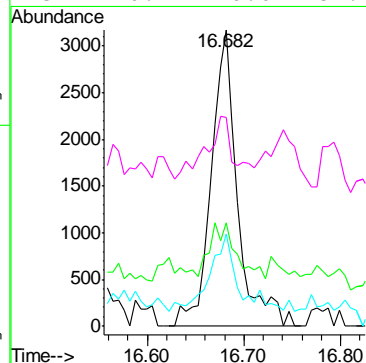
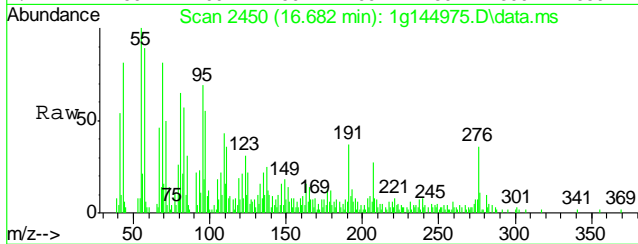
#92
 Benzo(a)pyrene
 Concen: 1.2401 ppm
 RT: 15.084 min Scan# 2178
 Delta R.T. -0.016 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

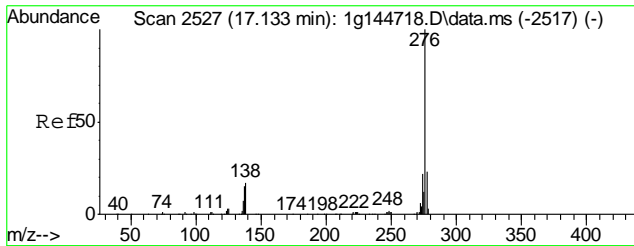
Tgt Ion	Resp	Lower	Upper
252	100		
253	34.2	1.7	41.7
125	0.0	0.0	28.3
126	0.0	0.0	30.1



#93
 Indeno(1,2,3-cd)pyrene
 Concen: 1.7454 ppm
 RT: 16.682 min Scan# 2450
 Delta R.T. -0.022 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

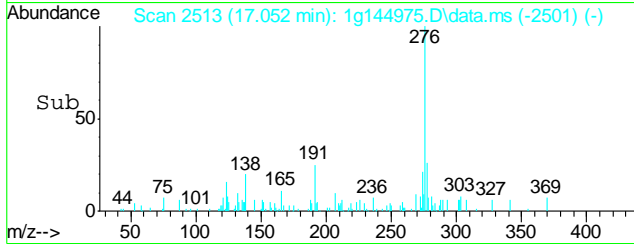
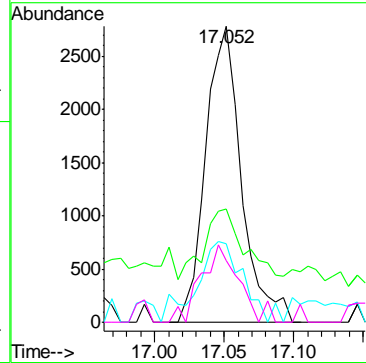
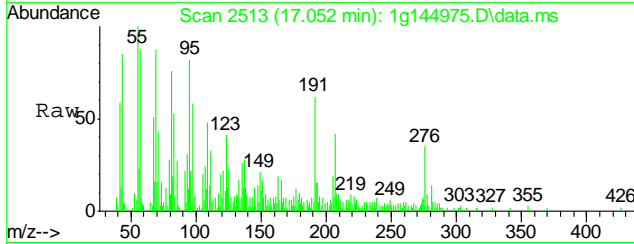
Tgt Ion	Resp	Lower	Upper
276	100		
138	18.8	0.0	36.3
277	25.1	4.1	44.1
137	20.2	0.0	32.1





#95
 Benzo(g,h,i)perylene
 Concen: 1.3924 ppm
 RT: 17.052 min Scan# 2513
 Delta R.T. -0.028 min
 Lab File: 1g144975.D
 Acq: 7 Oct 2019 4:03 pm

Tgt Ion	Resp	Lower	Upper
276	4941		
276	100		
138	26.3	0.0	37.2
277	34.4	3.4	43.4
274	28.1	1.5	41.5



7.1.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E1G2572\
 Data File : 1g144967.D
 Acq On : 7 Oct 2019 12:22 pm
 Operator : LINDSEYT
 Sample : OP18375-MB
 Misc : OP18375,E1G2572,5,,,1,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 07 12:59:53 2019
 Quant Method : C:\msdchem\1\METHODS\bnaelg2562.M
 Quant Title : 8270C Calibration
 QLast Update : Fri Oct 04 13:08:36 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.175	152	38352	40.0000	ppm	0.00
23) Naphthalene-d8	6.091	136	136550	40.0000	ppm	0.00
40) Acenaphthene-d10	7.413	164	78196	40.0000	ppm	-0.02
62) Phenanthrene-d10	8.882	188	161052	40.0000	ppm	-0.03
78) Chrysene-d12	12.806	240	154627	40.0000	ppm	-0.04
87) Perylene-d12	15.150	264	141389	40.0000	ppm	-0.03

System Monitoring Compounds

4) 2-Fluorophenol	4.217	112	42276	36.5778	ppm	0.00
Spiked Amount	50.000	Range	1 - 250	Recovery	=	73.16%
6) Phenol-d5	4.899	99	58698	38.3521	ppm	0.00
Spiked Amount	50.000	Range	1 - 250	Recovery	=	76.70%
24) Nitrobenzene-d5	5.568	82	57930	36.7643	ppm	0.00
Spiked Amount	50.000	Range	1 - 250	Recovery	=	73.52%
45) 2-Fluorobiphenyl	6.867	172	134288	37.7114	ppm	-0.02
Spiked Amount	50.000	Range	1 - 250	Recovery	=	75.42%
64) 2,4,6-Tribromophenol	8.130	330	17278	42.1207	ppm	-0.02
Spiked Amount	50.000	Range	1 - 250	Recovery	=	84.24%
81) Terphenyl-d14	11.108	244	197123	48.0872	ppm	-0.03
Spiked Amount	50.000	Range	1 - 250	Recovery	=	96.18%

Target Compounds

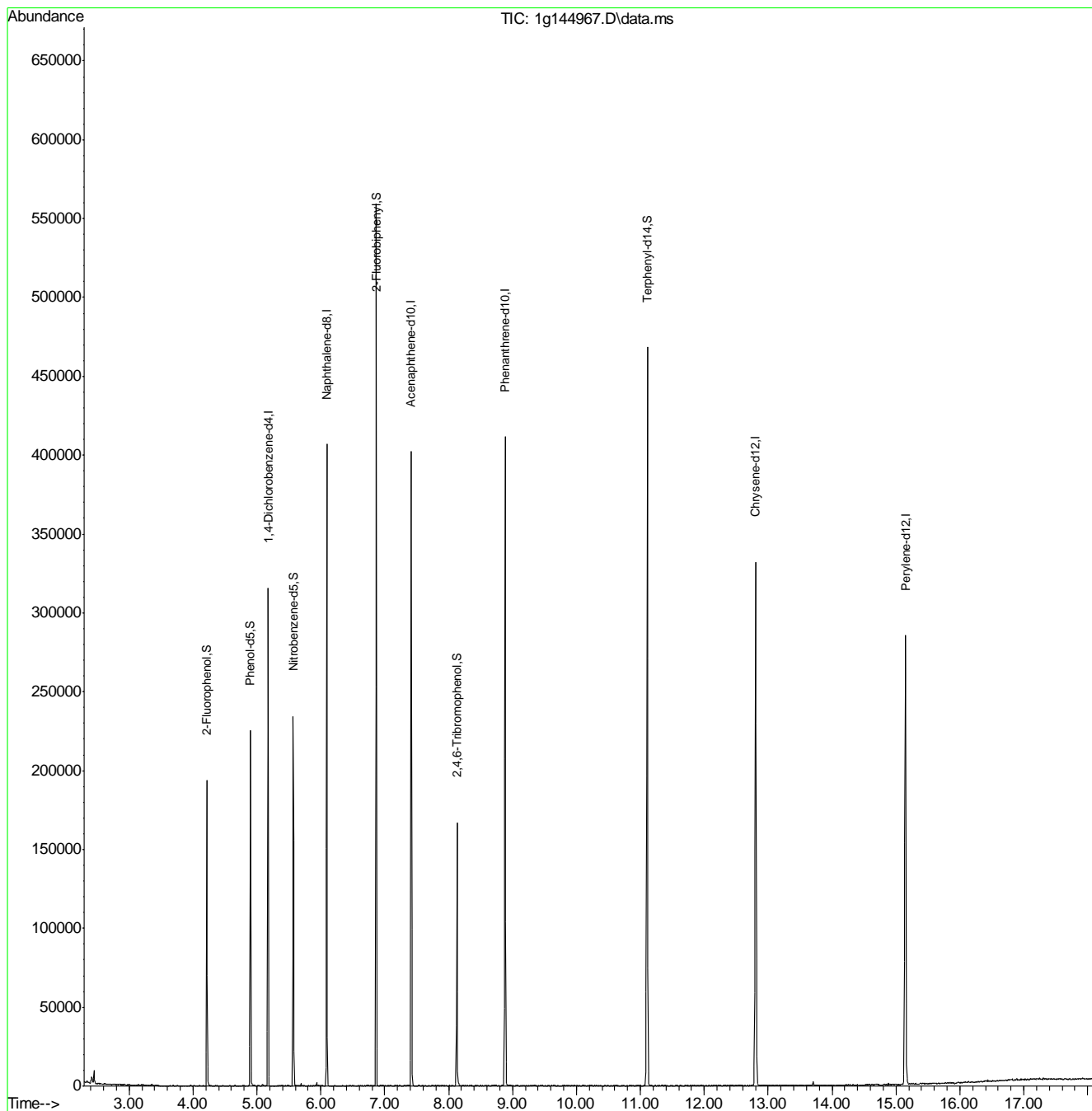
Qvalue

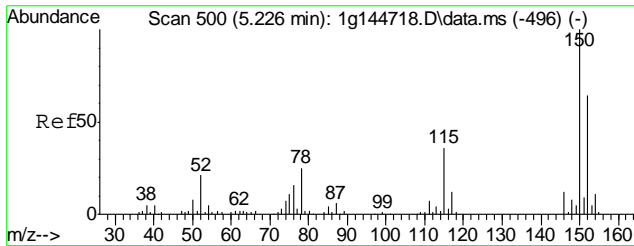
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E1G2572\
Data File : 1g144967.D
Acq On : 7 Oct 2019 12:22 pm
Operator : LINDSEYT
Sample : OP18375-MB
Misc : OP18375,E1G2572,5,,,1,1
ALS Vial : 6 Sample Multiplier: 1

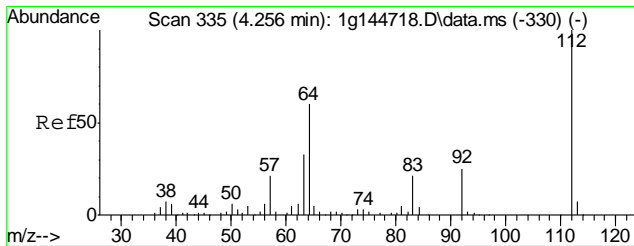
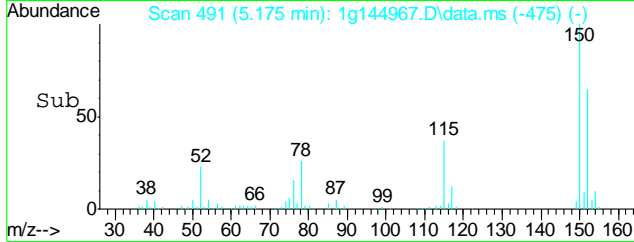
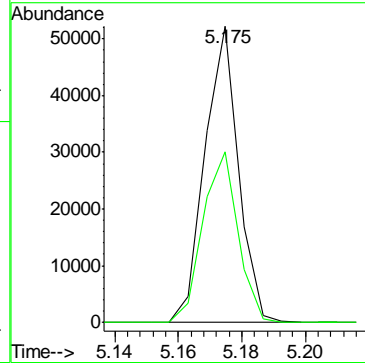
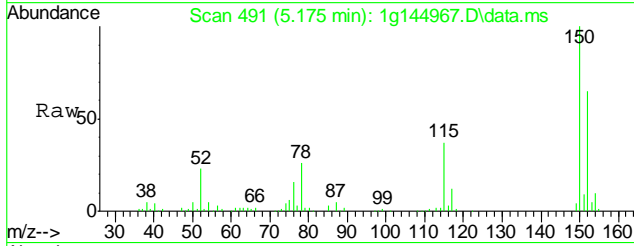
Quant Time: Oct 07 12:59:53 2019
Quant Method : C:\msdchem\1\METHODS\bnaelg2562.M
Quant Title : 8270C Calibration
QLast Update : Fri Oct 04 13:08:36 2019
Response via : Initial Calibration





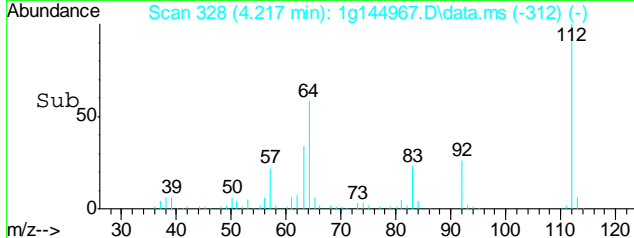
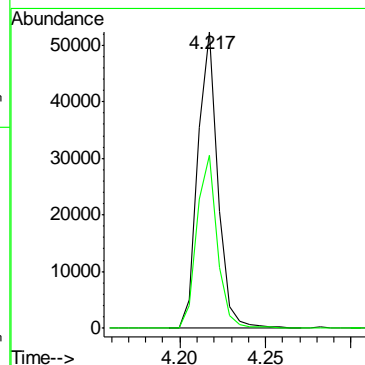
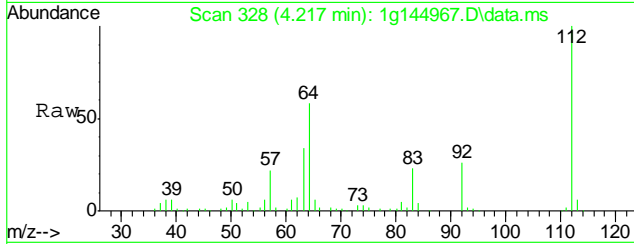
#1
 1,4-Dichlorobenzene-d4
 Concen: 40.0000 ppm
 RT: 5.175 min Scan# 491
 Delta R.T. -0.003 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

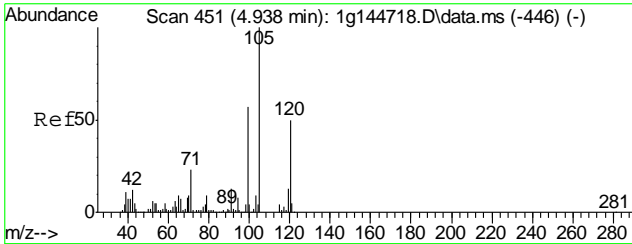
Tgt Ion	Resp	Lower	Upper
152	38352		
152	100		
115	60.3	38.9	78.9



#4
 2-Fluorophenol
 Concen: 36.5778 ppm
 RT: 4.217 min Scan# 328
 Delta R.T. -0.003 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

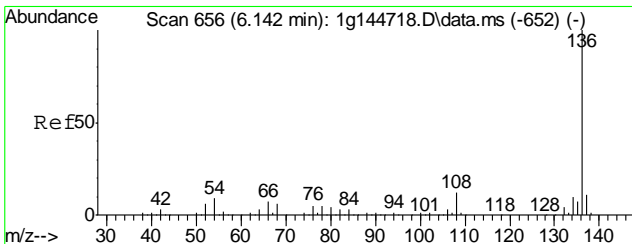
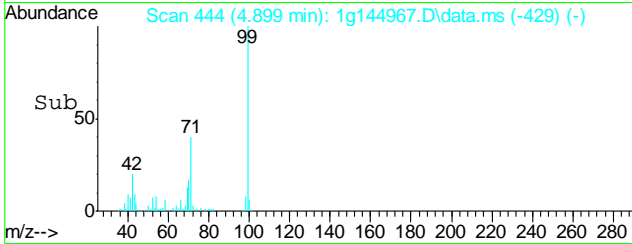
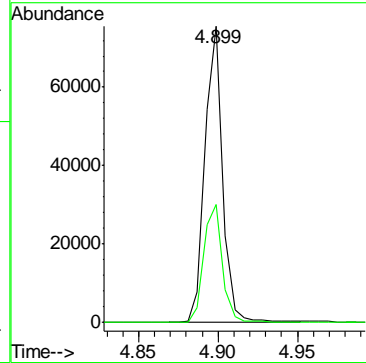
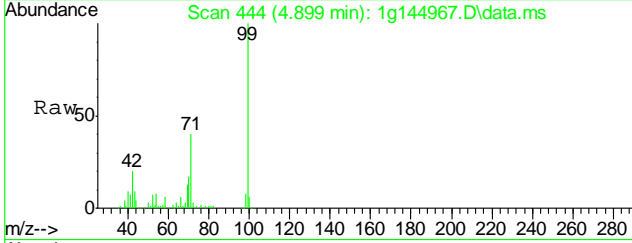
Tgt Ion	Resp	Lower	Upper
112	42276		
112	100		
64	59.7	40.0	80.0





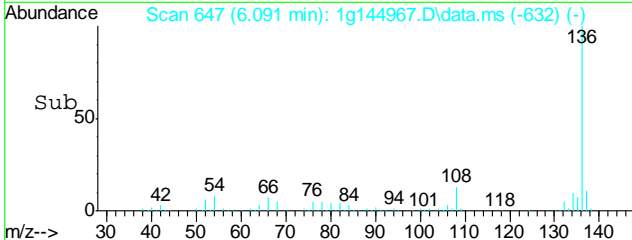
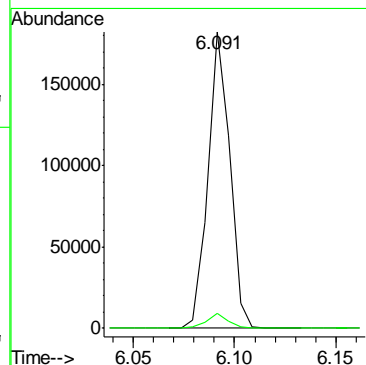
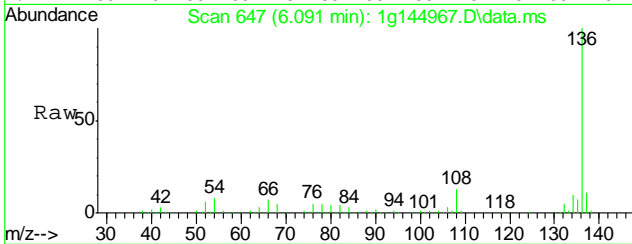
#6
 Phenol-d5
 Concen: 38.3521 ppm
 RT: 4.899 min Scan# 444
 Delta R.T. -0.009 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

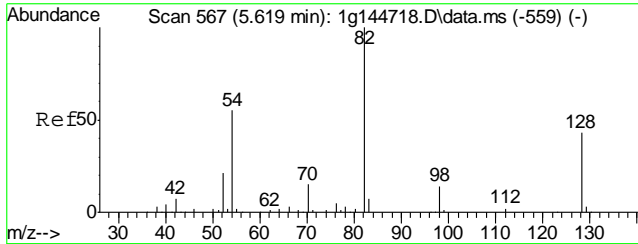
Tgt Ion: 99 Resp: 58698
 Ion Ratio Lower Upper
 99 100
 71 41.6 20.0 60.0



#23
 Naphthalene-d8
 Concen: 40.0000 ppm
 RT: 6.091 min Scan# 647
 Delta R.T. -0.009 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

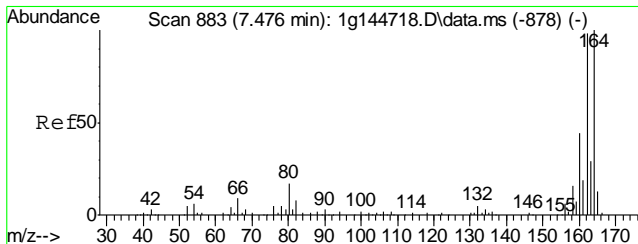
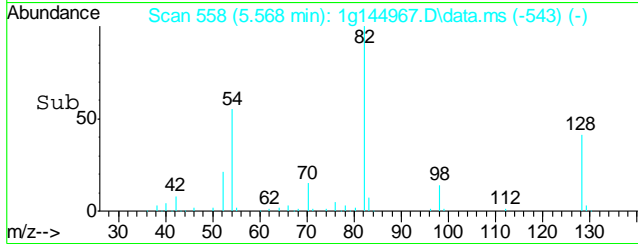
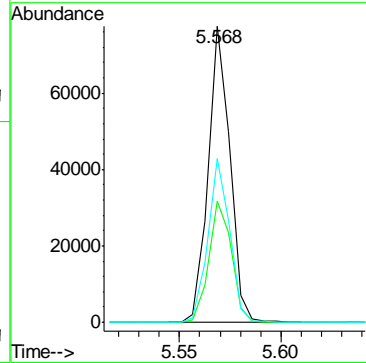
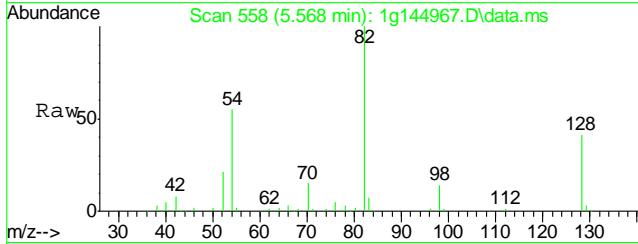
Tgt Ion: 136 Resp: 136550
 Ion Ratio Lower Upper
 136 100
 68 4.8 0.0 25.3





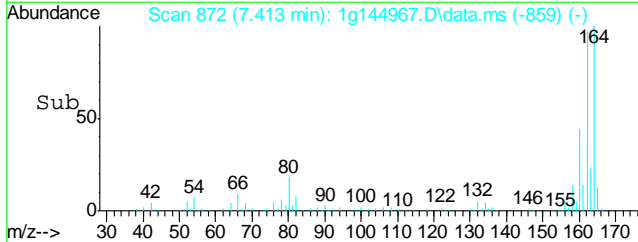
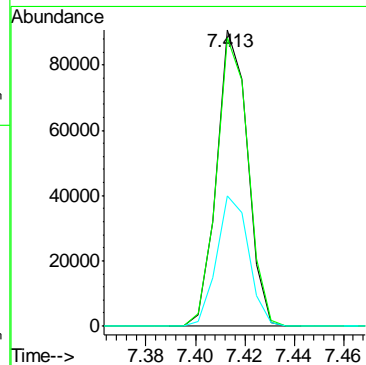
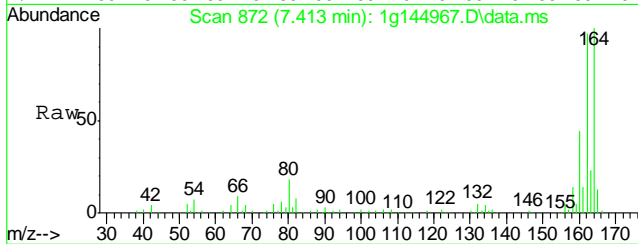
#24
 Nitrobenzene-d5
 Concen: 36.7643 ppm
 RT: 5.568 min Scan# 558
 Delta R.T. -0.009 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

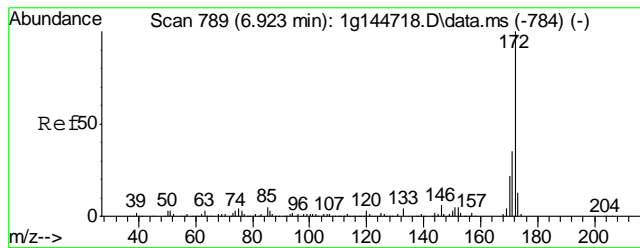
Tgt Ion	Resp	Lower	Upper
82	57930	100	
128	42.3	20.0	60.0
54	55.1	29.7	69.7



#40
 Acenaphthene-d10
 Concen: 40.0000 ppm
 RT: 7.413 min Scan# 872
 Delta R.T. -0.021 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

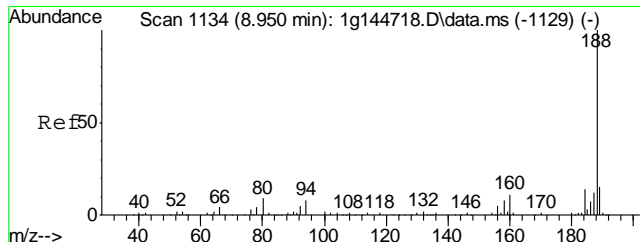
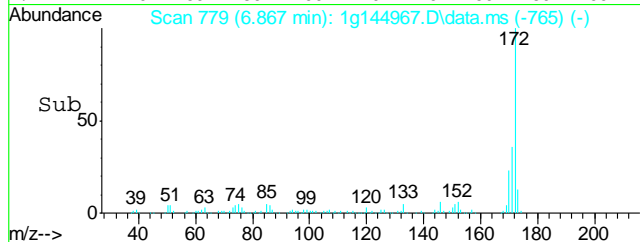
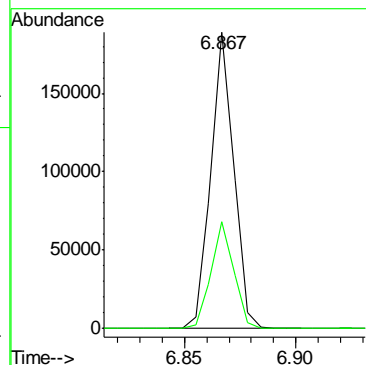
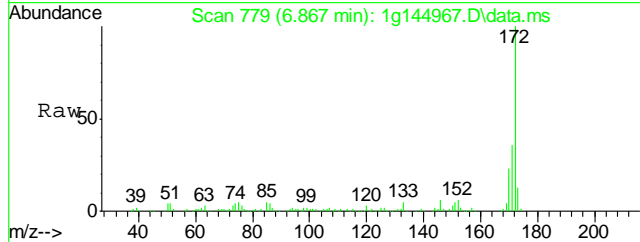
Tgt Ion	Resp	Lower	Upper
164	78196	100	
162	100.0	79.1	119.1
160	45.7	24.1	64.1





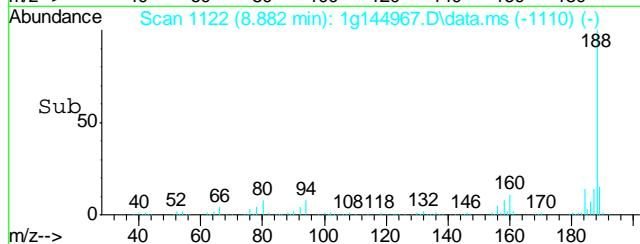
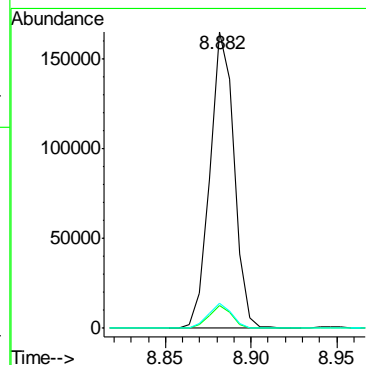
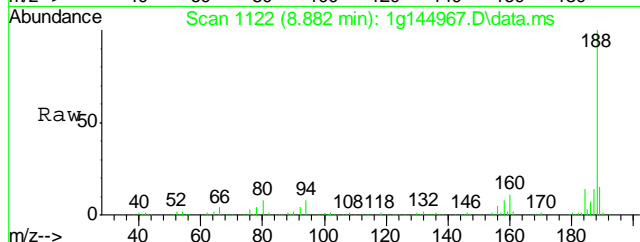
#45
 2-Fluorobiphenyl
 Concen: 37.7114 ppm
 RT: 6.867 min Scan# 779
 Delta R.T. -0.015 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion:172 Resp: 134288
 Ion Ratio Lower Upper
 172 100
 171 35.6 14.9 54.9



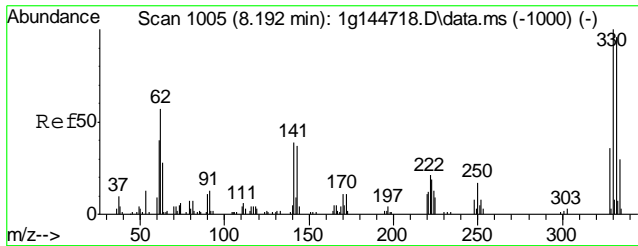
#62
 Phenanthrene-d10
 Concen: 40.0000 ppm
 RT: 8.882 min Scan# 1122
 Delta R.T. -0.027 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion:188 Resp: 161052
 Ion Ratio Lower Upper
 188 100
 94 7.2 0.0 28.0
 80 8.1 0.0 28.9



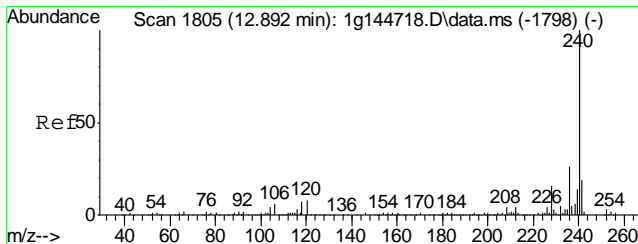
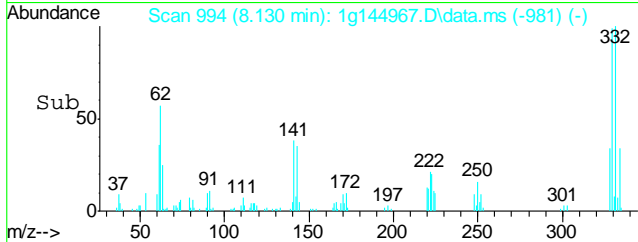
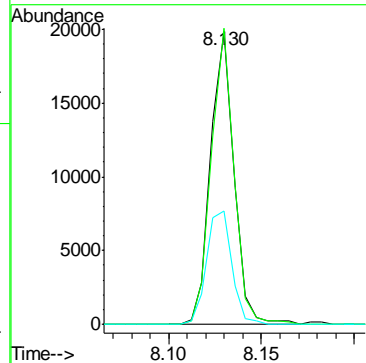
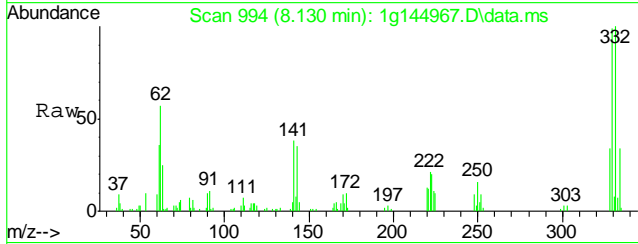
7.2.1
 7





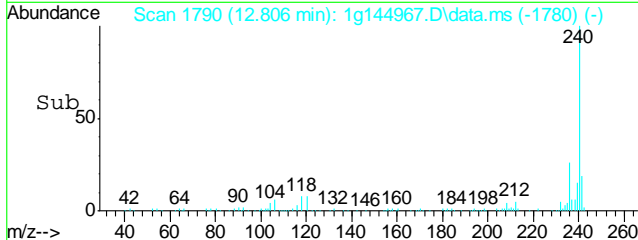
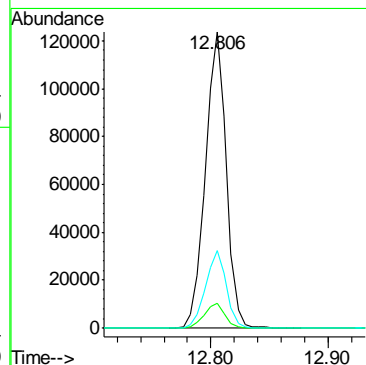
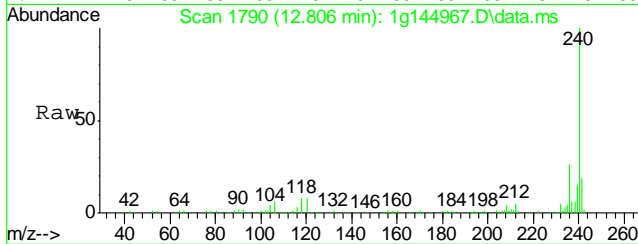
#64
 2,4,6-Tribromophenol
 Concen: 42.1207 ppm
 RT: 8.130 min Scan# 994
 Delta R.T. -0.021 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion	Resp	Lower	Upper
330	17278	100	
332	98.1	78.0	117.0
141	41.6	32.4	48.6

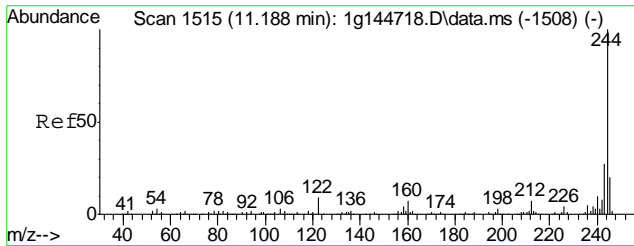


#78
 Chrysene-d12
 Concen: 40.0000 ppm
 RT: 12.806 min Scan# 1790
 Delta R.T. -0.039 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion	Resp	Lower	Upper
240	154627	100	
120	8.3	0.0	28.3
236	26.0	6.0	46.0

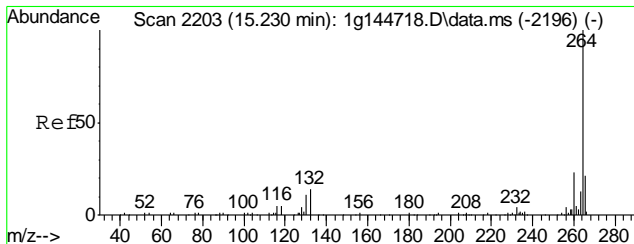
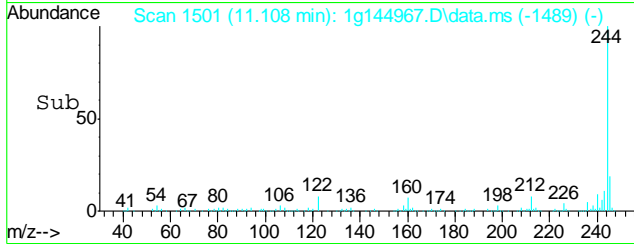
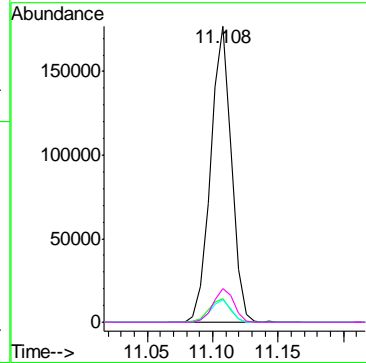
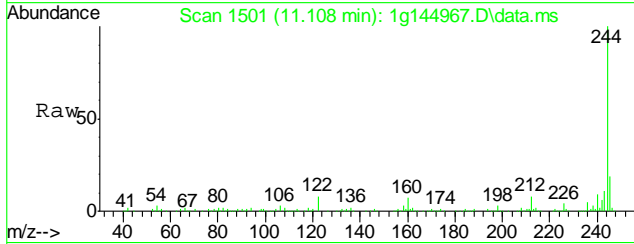


7.2.1
7



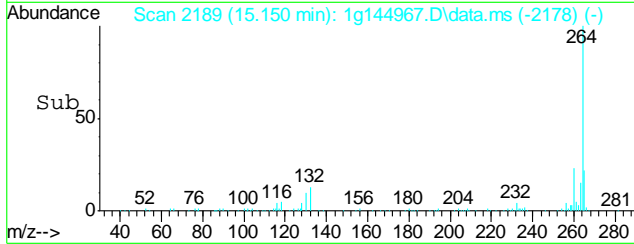
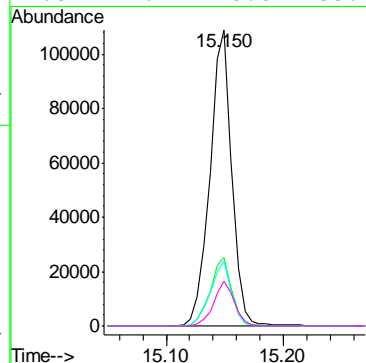
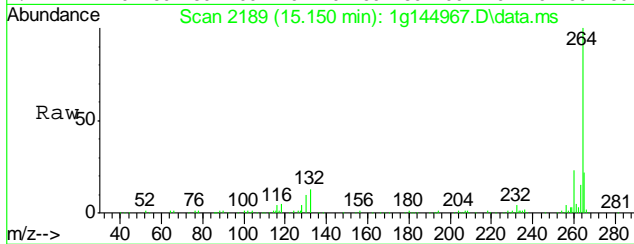
#81
 Terphenyl-d14
 Concen: 48.0872 ppm
 RT: 11.108 min Scan# 1501
 Delta R.T. -0.027 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion	Ratio	Lower	Upper
244	100		
122	8.2	0.0	28.7
212	7.5	0.0	27.7
243	11.2	5.2	45.2



#87
 Perylene-d12
 Concen: 40.0000 ppm
 RT: 15.150 min Scan# 2189
 Delta R.T. -0.033 min
 Lab File: 1g144967.D
 Acq: 7 Oct 2019 12:22 pm

Tgt Ion	Ratio	Lower	Upper
264	100		
260	22.9	2.8	42.8
265	21.2	1.2	41.2
263	14.4	0.0	33.8



GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18377-MB	EI8365.D	1	10/08/19	GN	10/07/19	OP18377	GEI431

The QC reported here applies to the following samples:

Method: SW846 8082A

DA20878-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	100	40	ug/kg	
11104-28-2	Aroclor 1221	ND	100	40	ug/kg	
11141-16-5	Aroclor 1232	ND	100	40	ug/kg	
53469-21-9	Aroclor 1242	ND	100	40	ug/kg	
12672-29-6	Aroclor 1248	ND	100	40	ug/kg	
11097-69-1	Aroclor 1254	ND	100	42	ug/kg	
11096-82-5	Aroclor 1260	ND	100	40	ug/kg	
37324-23-5	Aroclor 1262	ND	100	40	ug/kg	
11100-14-4	Aroclor 1268	ND	100	30	ug/kg	
1336-36-3	Total PCBs	ND	100	42	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	90%	10-149%
877-09-8	Tetrachloro-m-xylene	93%	10-149%
2051-24-3	Decachlorobiphenyl	83%	11-162%
2051-24-3	Decachlorobiphenyl	84%	11-162%

Blank Spike Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18377-BS	EI8366.D	1	10/08/19	GN	10/07/19	OP18377	GEI431

The QC reported here applies to the following samples:

Method: SW846 8082A

DA20878-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	1000	861	86	70-133
11096-82-5	Aroclor 1260	1000	870	87	75-139
1336-36-3	Total PCBs	2000	1610	81	70-139

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	89%	10-149%
877-09-8	Tetrachloro-m-xylene	91%	10-149%
2051-24-3	Decachlorobiphenyl	81%	11-162%
2051-24-3	Decachlorobiphenyl	88%	11-162%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA20878
Account: WESTCOL Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18377-MS	EI8367.D	1	10/08/19	GN	10/07/19	OP18377	GEI431
OP18377-MSD	EI8368.D	1	10/08/19	GN	10/07/19	OP18377	GEI431
DA20878-1	EI8369.D	1	10/08/19	GN	10/07/19	OP18377	GEI431

The QC reported here applies to the following samples:

Method: SW846 8082A

DA20878-1

CAS No.	Compound	DA20878-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	1110	1040	94	1110	898	81	15	10-200/30
11096-82-5	Aroclor 1260	ND	1110	1110	100	1110	907	82	20	10-189/30
1336-36-3	Total PCBs	ND	2210	1960	89	2210	1810	82	8	10-200/30

CAS No.	Surrogate Recoveries	MS	MSD	DA20878-1	Limits
877-09-8	Tetrachloro-m-xylene	68%	62%	63%	10-149%
877-09-8	Tetrachloro-m-xylene	92%	83%	87%	10-149%
2051-24-3	Decachlorobiphenyl	104%	110%	121%	11-162%
2051-24-3	Decachlorobiphenyl	95%	104%	97%	11-162%

* = Outside of Control Limits.

GC/LC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100719\
Data File : EI8369.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 08-Oct-19, 02:26:05
Operator : GRANTN
Sample : DA20878-1
Misc : OP18377,GEI431,5.0,,,10,1
ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 08 11:00:09 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx cl pest.columns
QLast Update : Mon Oct 07 14:37:50 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
1) S TCMX	3.623	3.313	28705704	34492339	62.675	86.956
2) S Decachlor...	9.889	9.558	35360975	23833246	120.726	97.123

Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

9.1.1
9

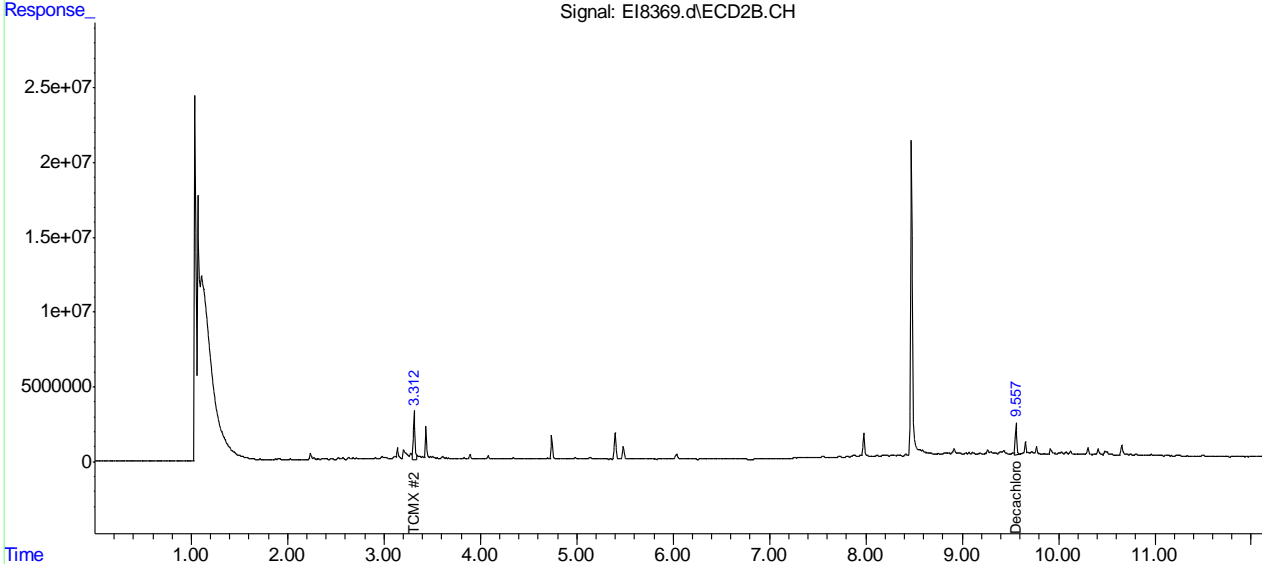
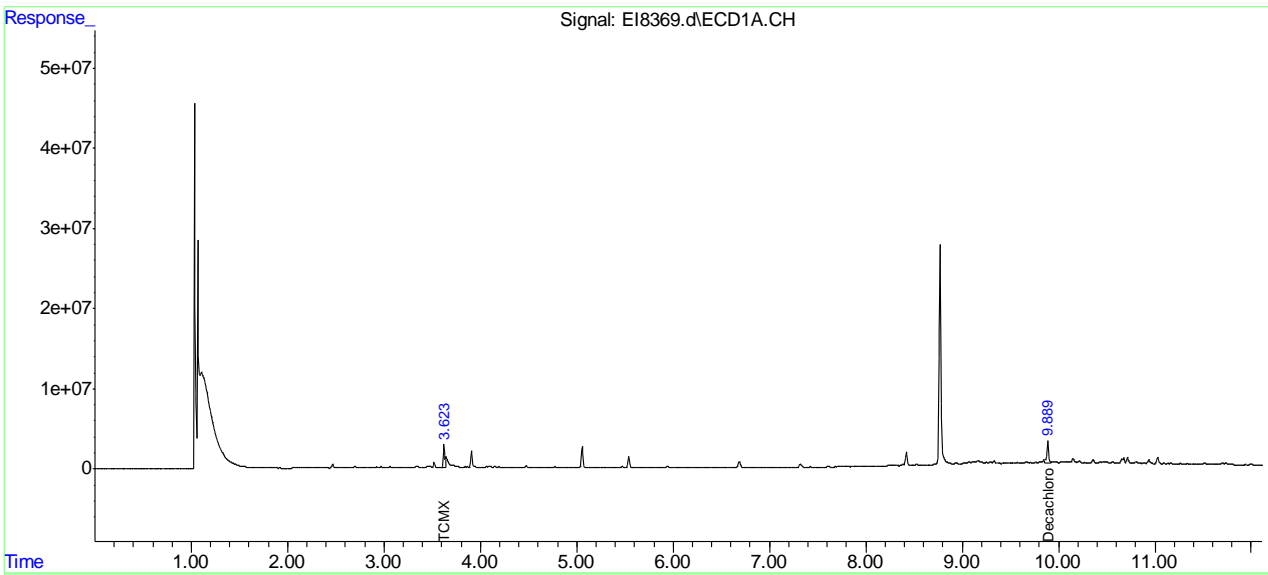


Quantitation Report (QT Reviewed)

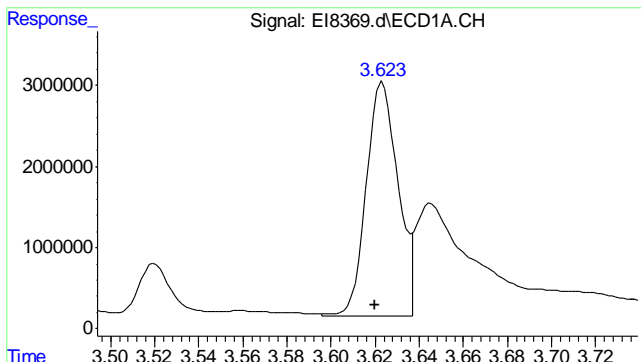
Data Path : C:\msdchem\2\data\2019\10.2019\EI100719\
Data File : EI8369.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 08-Oct-19, 02:26:05
Operator : GRANTN
Sample : DA20878-1
Misc : OP18377,GEI431,5.0,,,10,1
ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 08 11:00:09 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx c1 pest.columns
QLast Update : Mon Oct 07 14:37:50 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

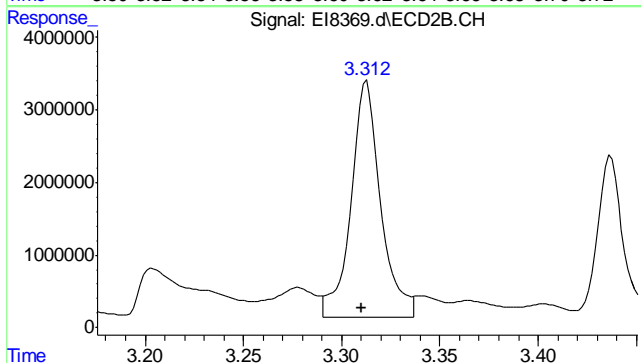
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



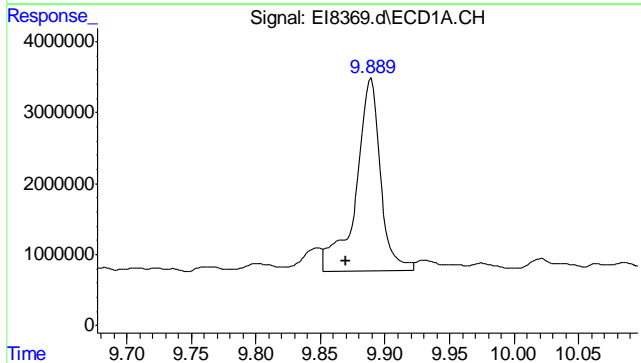
9.1.1
9



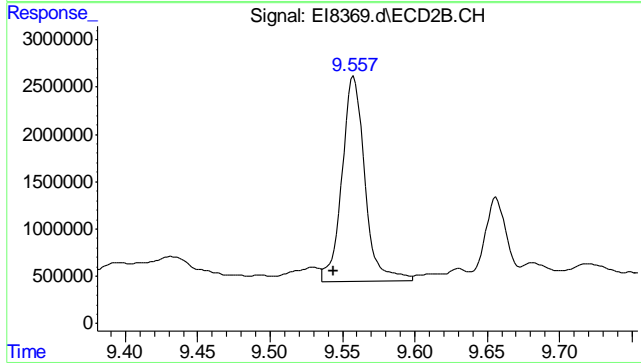
#1 TCMX
 R.T.: 3.623 min
 Delta R.T.: 0.003 min
 Response: 28705704
 Conc: 62.68 ug/L



#1 TCMX
 R.T.: 3.313 min
 Delta R.T.: 0.003 min
 Response: 34492339
 Conc: 86.96 ug/L



#2 Decachlorobiphenyl
 R.T.: 9.889 min
 Delta R.T.: 0.019 min
 Response: 35360975
 Conc: 120.73 ug/L



#2 Decachlorobiphenyl
 R.T.: 9.558 min
 Delta R.T.: 0.014 min
 Response: 23833246
 Conc: 97.12 ug/L

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100719\
Data File : EI8365.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 08-Oct-19, 01:08:08
Operator : GRANTN
Sample : OP18377-MB
Misc : OP18377,GEI431,5.0,,,10,1
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 08 10:57:51 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx cl pest.columns
QLast Update : Mon Oct 07 14:37:50 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) S TCMX	3.624	3.313	40839811	36782487	89.619	92.799
2) S Decachlor...	9.885	9.554	24463314	20748868	83.233	84.386

Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

9.2.1
9

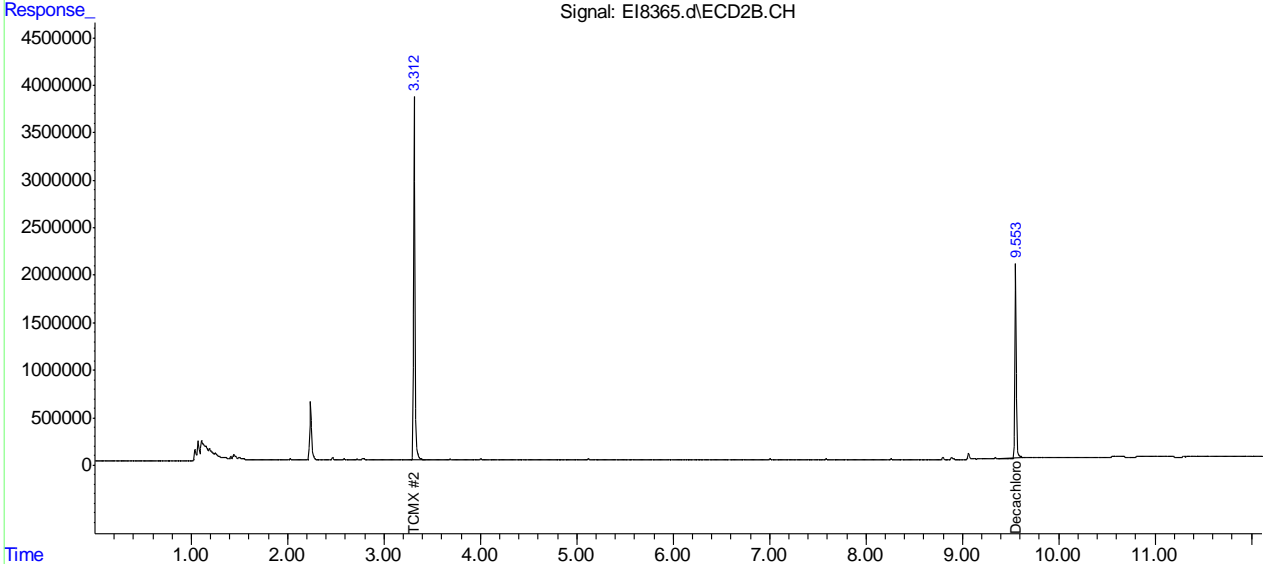
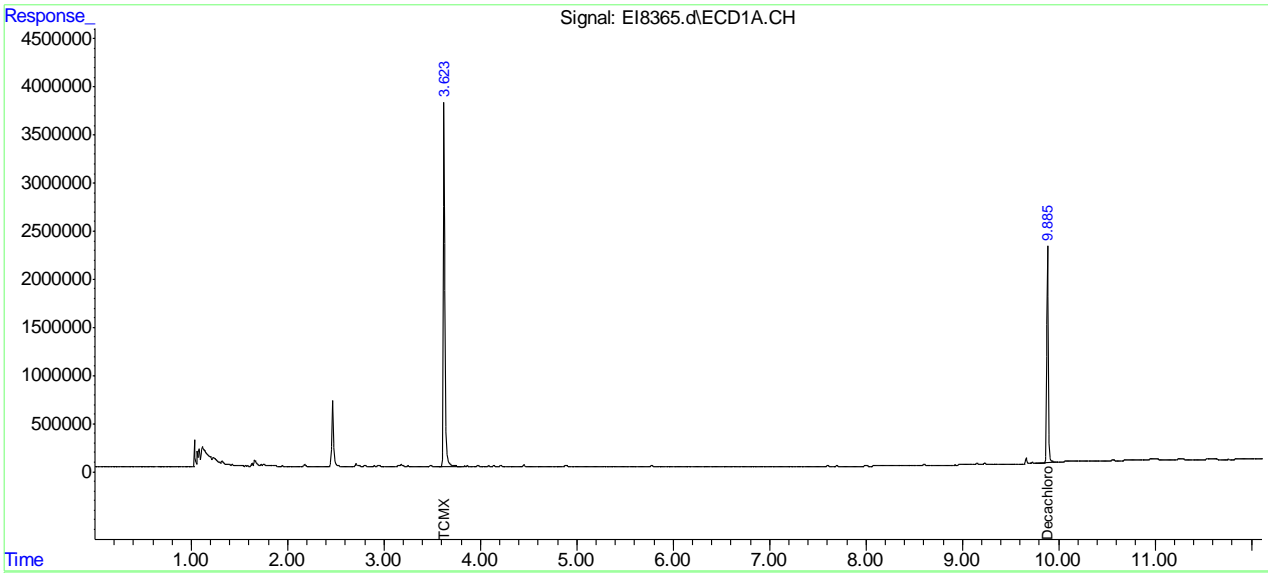


Quantitation Report (QT Reviewed)

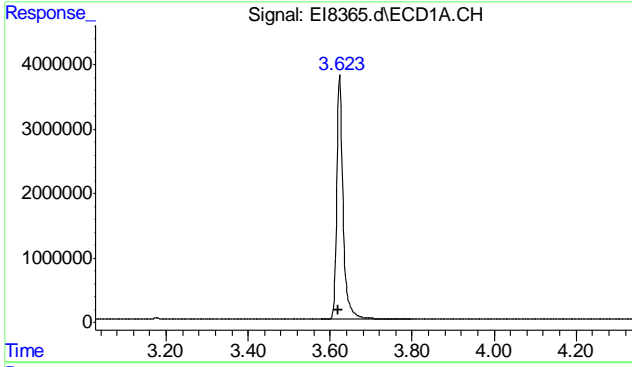
Data Path : C:\msdchem\2\data\2019\10.2019\EI100719\
Data File : EI8365.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 08-Oct-19, 01:08:08
Operator : GRANTN
Sample : OP18377-MB
Misc : OP18377,GEI431,5.0,,,10,1
ALS Vial : 23 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 08 10:57:51 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx c1 pest.columns
QLast Update : Mon Oct 07 14:37:50 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

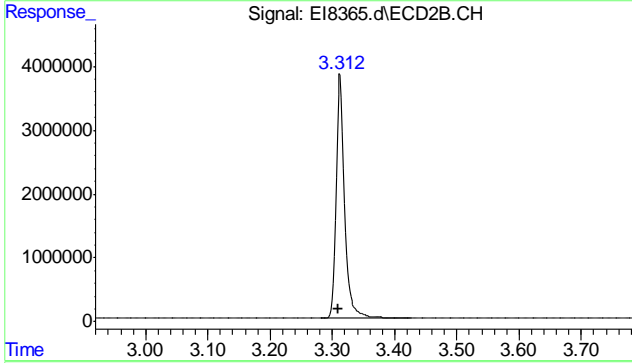
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



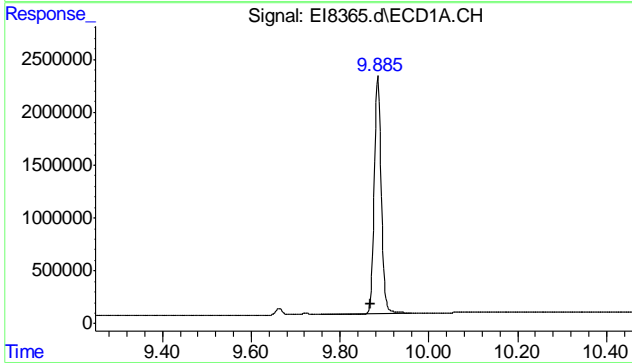
9.2.1
9



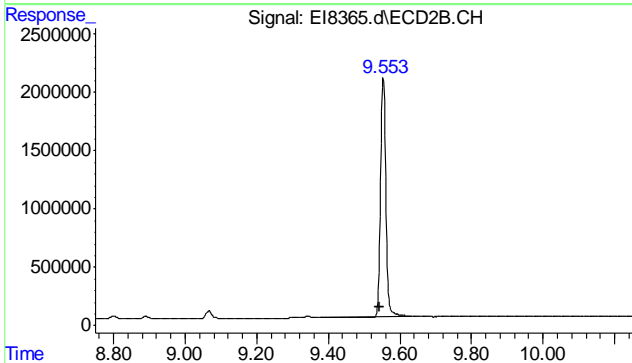
#1 TCMX
 R.T.: 3.624 min
 Delta R.T.: 0.004 min
 Response: 40839811
 Conc: 89.62 ug/L



#1 TCMX
 R.T.: 3.313 min
 Delta R.T.: 0.002 min
 Response: 36782487
 Conc: 92.80 ug/L



#2 Decachlorobiphenyl
 R.T.: 9.885 min
 Delta R.T.: 0.015 min
 Response: 24463314
 Conc: 83.23 ug/L



#2 Decachlorobiphenyl
 R.T.: 9.554 min
 Delta R.T.: 0.010 min
 Response: 20748868
 Conc: 84.39 ug/L

9.2.1
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8317.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 03:07:40
 Operator : GRANTN
 Sample : ICC430-1000, PCB
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:31:17 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds							
1)	S TCMX	3.619	3.310	49766576	42754863	109.442	108.036
2)	S Decachlor...	9.874	9.549	31100196	26529237	106.067	108.256
Target Compounds							
3)	AR1016-A	3.946	3.665	8364141	7353162	1108.347	1096.865
4)	AR1016-B	4.267	3.969	16784277	15083043	991.221	989.084
5)	AR1016-C	4.702	4.333	21494314	19576353	1103.818	1083.976
6)	AR1016-D	4.827	4.528	12481186	7730740	1104.497	1067.704
7)	AR1016-E	5.009	4.840	7842476	9947060	1090.127	1080.003
8)	AR1260-A	6.980	6.384	22975545	19935147	1094.076	1087.218
9)	AR1260-B	7.406	6.753	34752026	22101627	1098.446	1073.958
10)	AR1260-C	7.588	7.036	14624302	15294280	1055.561	1053.245
11)	AR1260-D	8.588	8.130	37257749	31643273	1068.849	1064.549
12)	AR1260-E	8.882	8.516	19767209	21819924	1062.381	1057.651

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

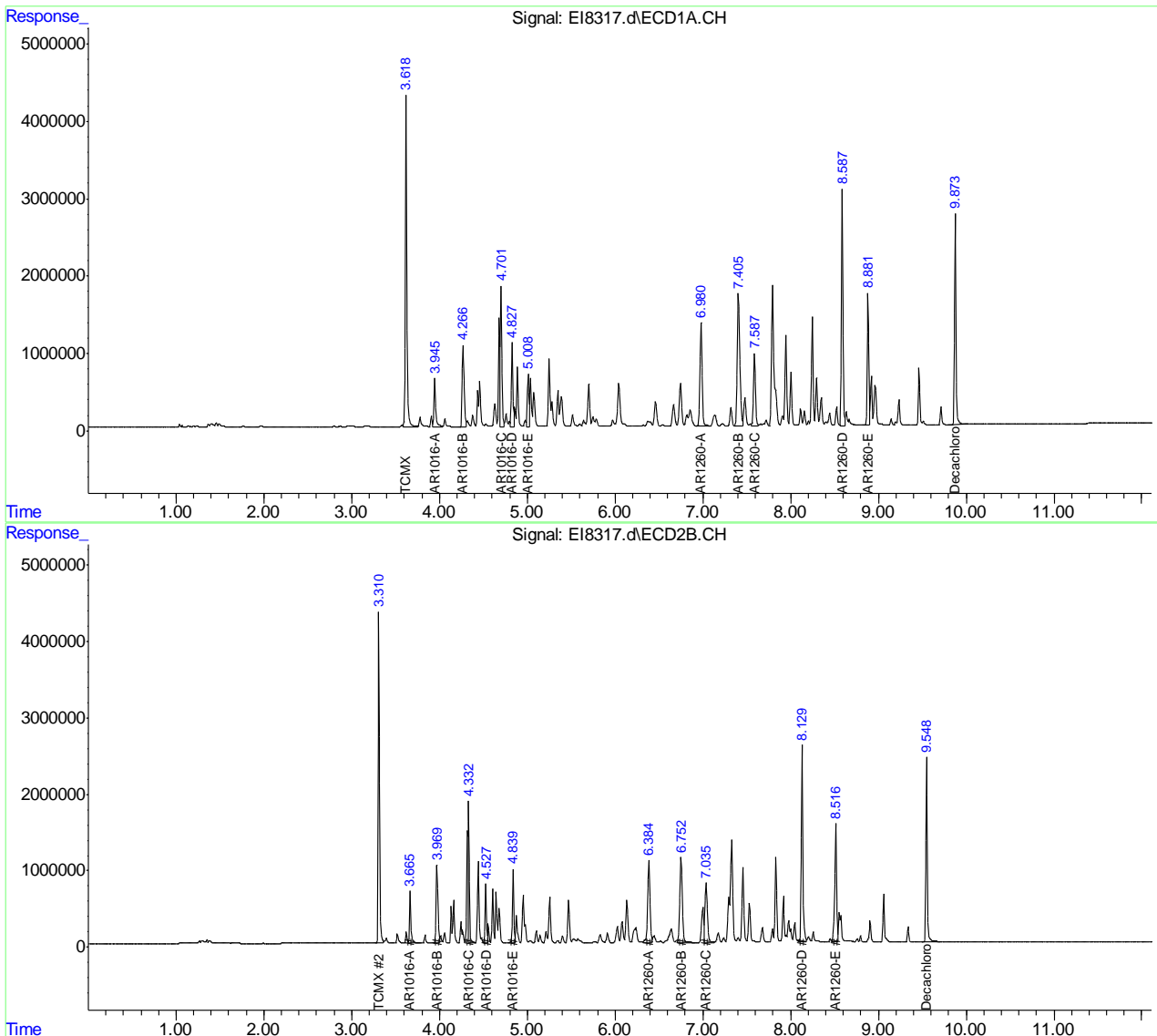
9.3.1
9

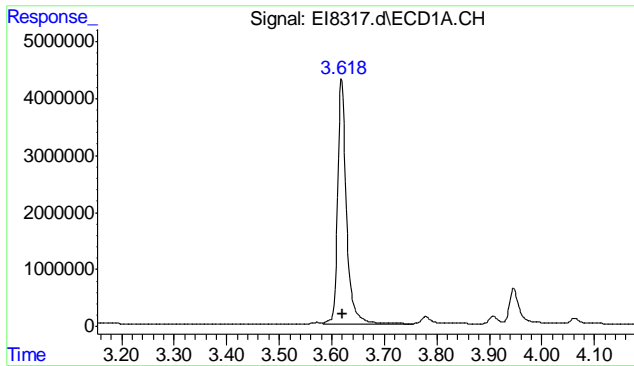
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
Data File : EI8317.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-Oct-19, 03:07:40
Operator : GRANTN
Sample : ICC430-1000, PCB
Misc : OP18346,GEI430,,,,,1
ALS Vial : 27 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

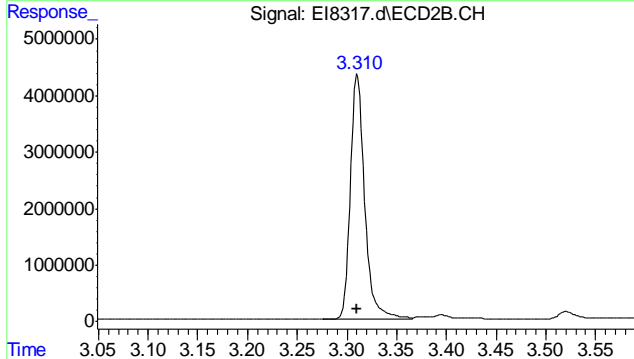
Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 07 14:31:17 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx c1 pest.columns
QLast Update : Mon Oct 07 14:27:42 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

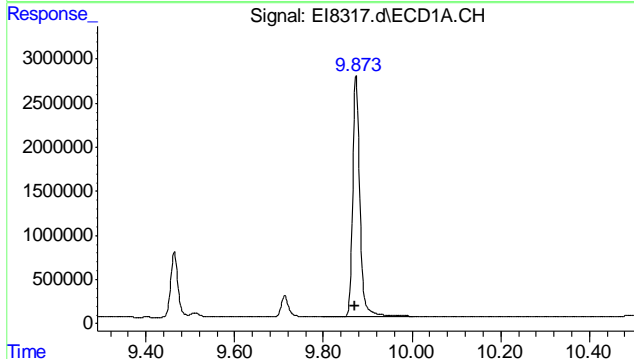




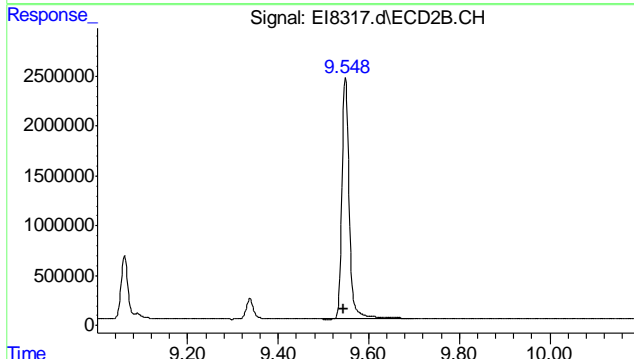
#1 TCMX
 R.T.: 3.619 min
 Delta R.T.: -0.001 min
 Response: 49766576
 Conc: 109.44 ug/L



#1 TCMX
 R.T.: 3.310 min
 Delta R.T.: 0.000 min
 Response: 42754863
 Conc: 108.04 ug/L

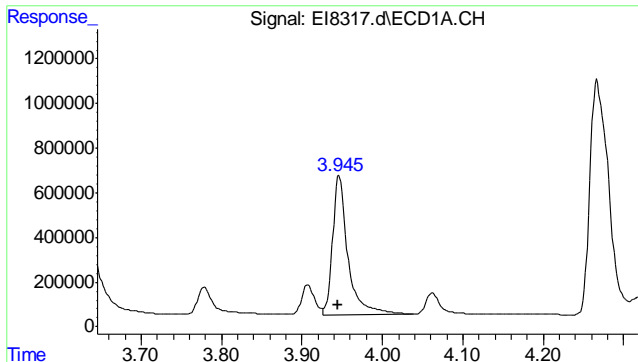


#2 Decachlorobiphenyl
 R.T.: 9.874 min
 Delta R.T.: 0.004 min
 Response: 31100196
 Conc: 106.07 ug/L

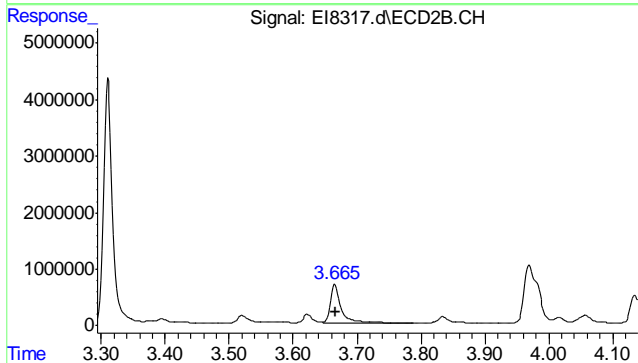


#2 Decachlorobiphenyl
 R.T.: 9.549 min
 Delta R.T.: 0.005 min
 Response: 26529237
 Conc: 108.26 ug/L

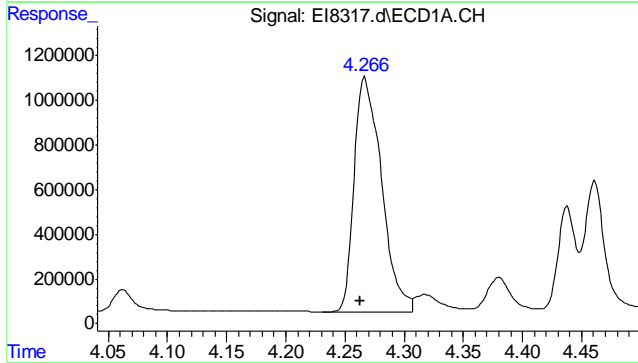
9.3.1
 9



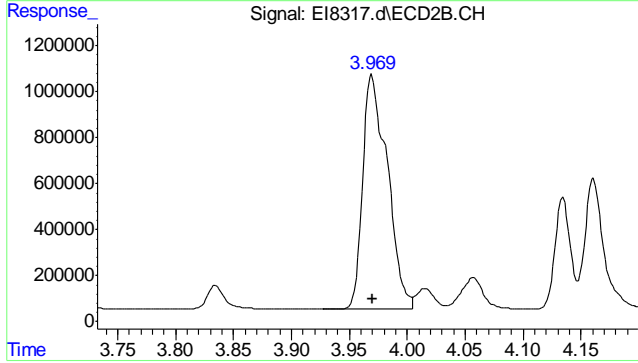
#3 AR1016-A
 R.T.: 3.946 min
 Delta R.T.: 0.000 min
 Response: 8364141
 Conc: 1108.35 ug/L



#3 AR1016-A
 R.T.: 3.665 min
 Delta R.T.: -0.002 min
 Response: 7353162
 Conc: 1096.86 ug/L

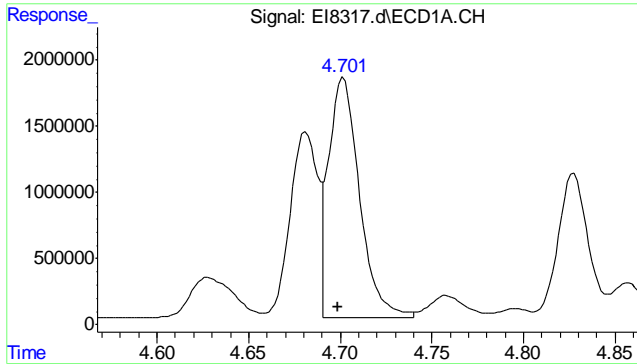


#4 AR1016-B
 R.T.: 4.267 min
 Delta R.T.: 0.004 min
 Response: 16784277
 Conc: 991.22 ug/L

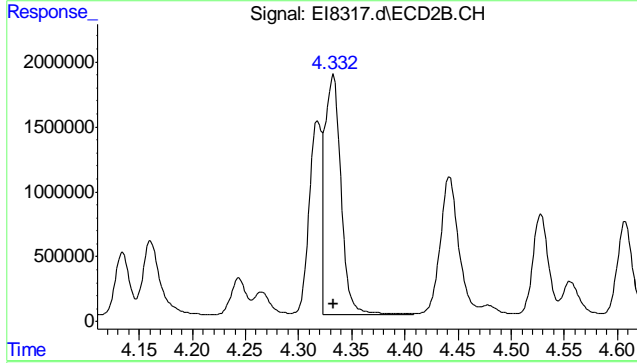


#4 AR1016-B
 R.T.: 3.969 min
 Delta R.T.: 0.000 min
 Response: 15083043
 Conc: 989.08 ug/L

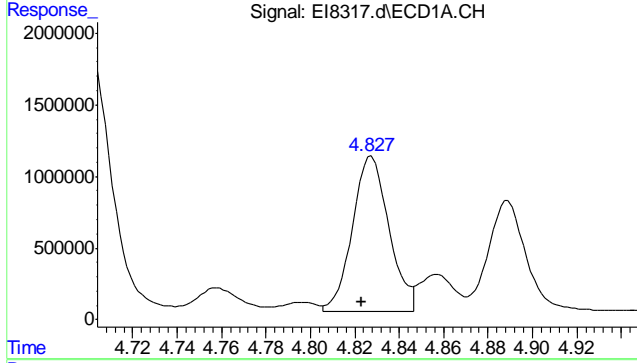
9.3.1
9



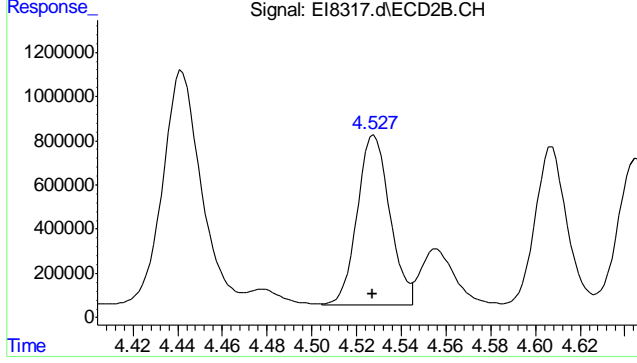
#5 AR1016-C
 R.T.: 4.702 min
 Delta R.T.: 0.003 min
 Response: 21494314
 Conc: 1103.82 ug/L



#5 AR1016-C
 R.T.: 4.333 min
 Delta R.T.: 0.000 min
 Response: 19576353
 Conc: 1083.98 ug/L

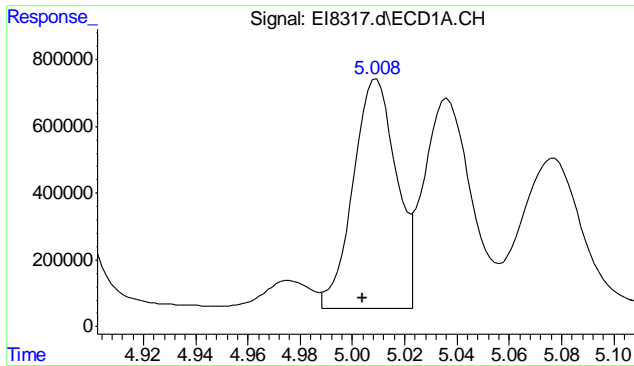


#6 AR1016-D
 R.T.: 4.827 min
 Delta R.T.: 0.004 min
 Response: 12481186
 Conc: 1104.50 ug/L

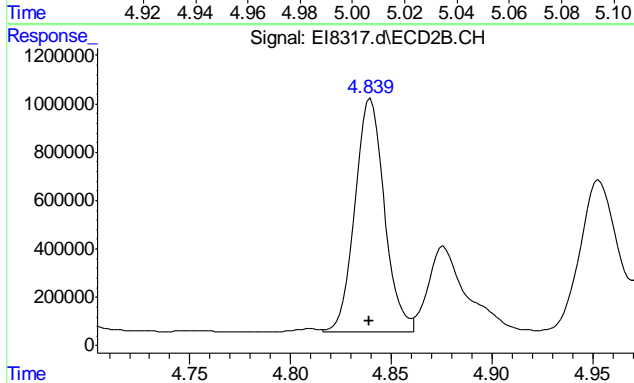


#6 AR1016-D
 R.T.: 4.528 min
 Delta R.T.: 0.000 min
 Response: 7730740
 Conc: 1067.70 ug/L

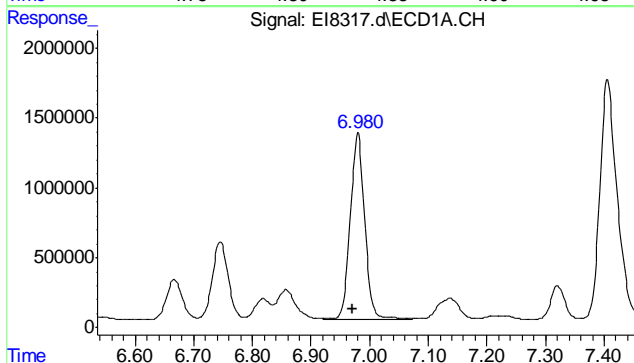
9.3.1
9



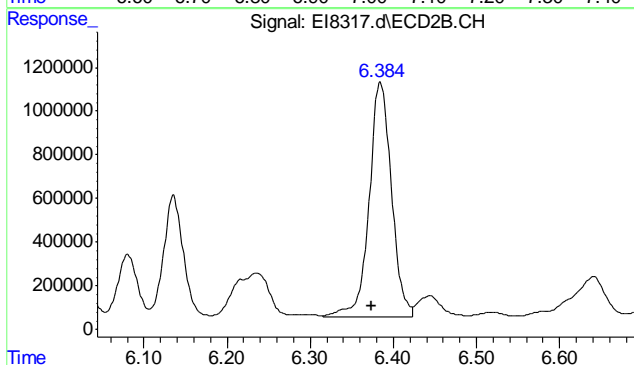
#7 AR1016-E
 R.T.: 5.009 min
 Delta R.T.: 0.005 min
 Response: 7842476
 Conc: 1090.13 ug/L



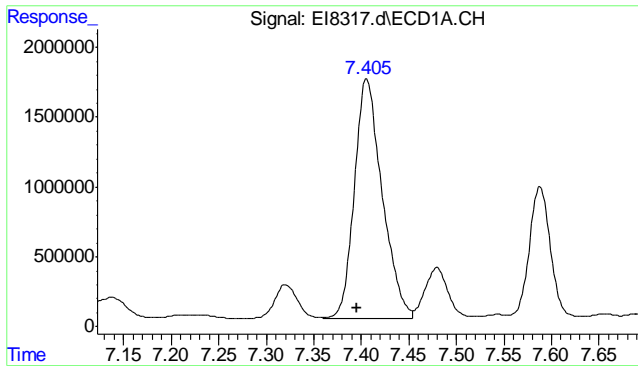
#7 AR1016-E
 R.T.: 4.840 min
 Delta R.T.: 0.000 min
 Response: 9947060
 Conc: 1080.00 ug/L



#8 AR1260-A
 R.T.: 6.980 min
 Delta R.T.: 0.009 min
 Response: 22975545
 Conc: 1094.08 ug/L

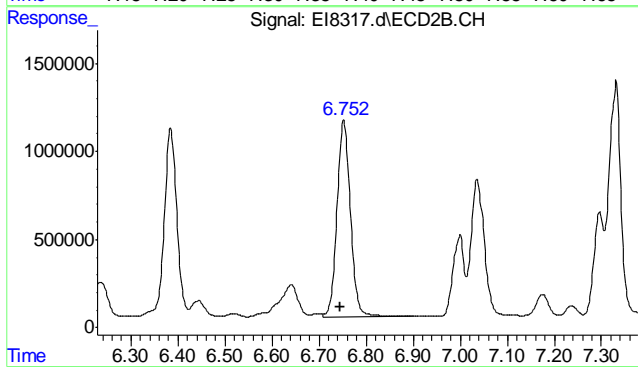


#8 AR1260-A
 R.T.: 6.384 min
 Delta R.T.: 0.010 min
 Response: 19935147
 Conc: 1087.22 ug/L



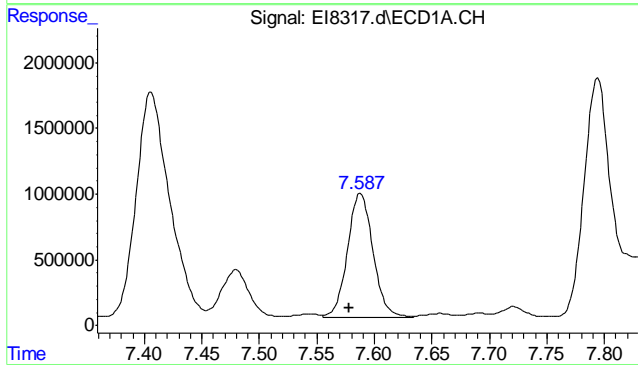
#9 AR1260-B

R.T.: 7.406 min
Delta R.T.: 0.011 min
Response: 34752026
Conc: 1098.45 ug/L



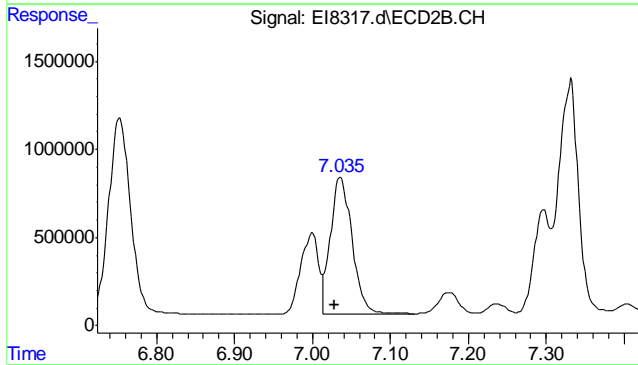
#9 AR1260-B

R.T.: 6.753 min
Delta R.T.: 0.009 min
Response: 22101627
Conc: 1073.96 ug/L



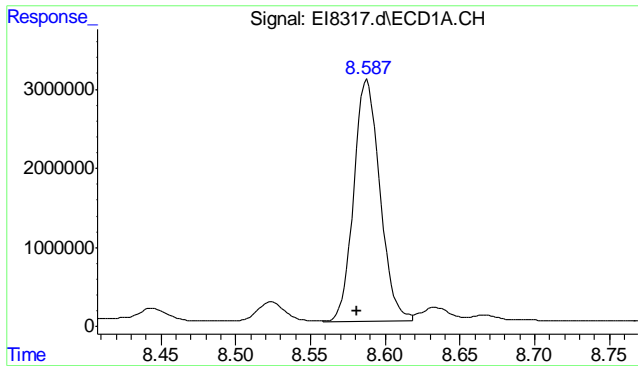
#10 AR1260-C

R.T.: 7.588 min
Delta R.T.: 0.010 min
Response: 14624302
Conc: 1055.56 ug/L

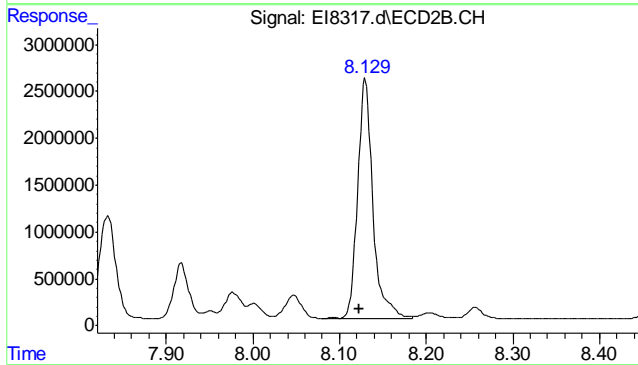


#10 AR1260-C

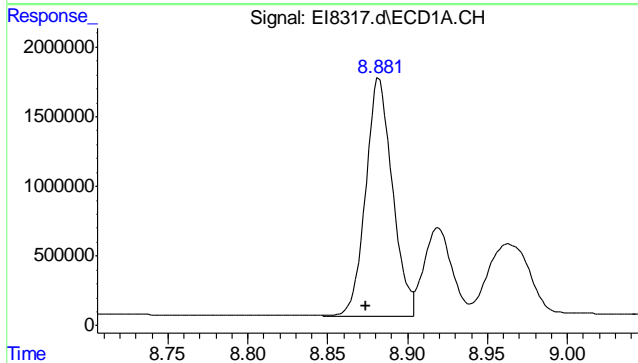
R.T.: 7.036 min
Delta R.T.: 0.008 min
Response: 15294280
Conc: 1053.25 ug/L



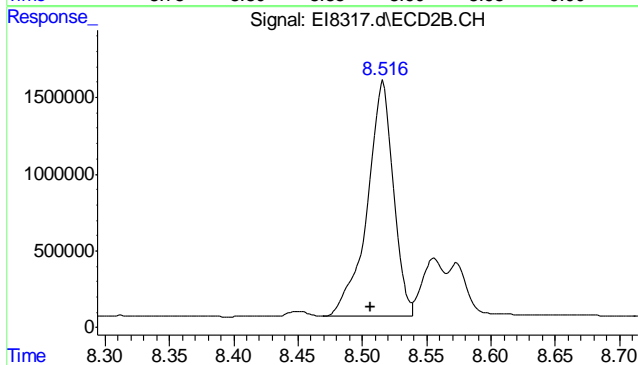
#11 AR1260-D
 R.T.: 8.588 min
 Delta R.T.: 0.007 min
 Response: 37257749
 Conc: 1068.85 ug/L



#11 AR1260-D
 R.T.: 8.130 min
 Delta R.T.: 0.007 min
 Response: 31643273
 Conc: 1064.55 ug/L



#12 AR1260-E
 R.T.: 8.882 min
 Delta R.T.: 0.008 min
 Response: 19767209
 Conc: 1062.38 ug/L



#12 AR1260-E
 R.T.: 8.516 min
 Delta R.T.: 0.010 min
 Response: 21819924
 Conc: 1057.65 ug/L

9.3.1
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8320.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 04:05:41
 Operator : GRANTN
 Sample : IC430-1000, 2154
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 30 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:31:49 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
Target Compounds						
13)	AR1221-A	3.158	2.983	3467600	3169423	1000.000
14)	AR1221-B	3.778	3.520	5052934	4388275	1000.000
15)	AR1221-C	3.907	3.622	2740101	2585111	1000.000
16)	AR1221-D	3.944	3.666	11407019	10019142	1000.000
32)	AR1254-A	5.008	4.607	10775425	9254660	1000.000
33)	AR1254-B	5.699	5.255	17513755	17946457	1000.000
34)	AR1254-C	6.042	5.469	31648897	18808901	1000.000
35)	AR1254-D	6.663	6.080	32063213	26486111	1000.000
36)	AR1254-E	7.794	7.327	30735495	25813690	1000.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

9.3.2
9

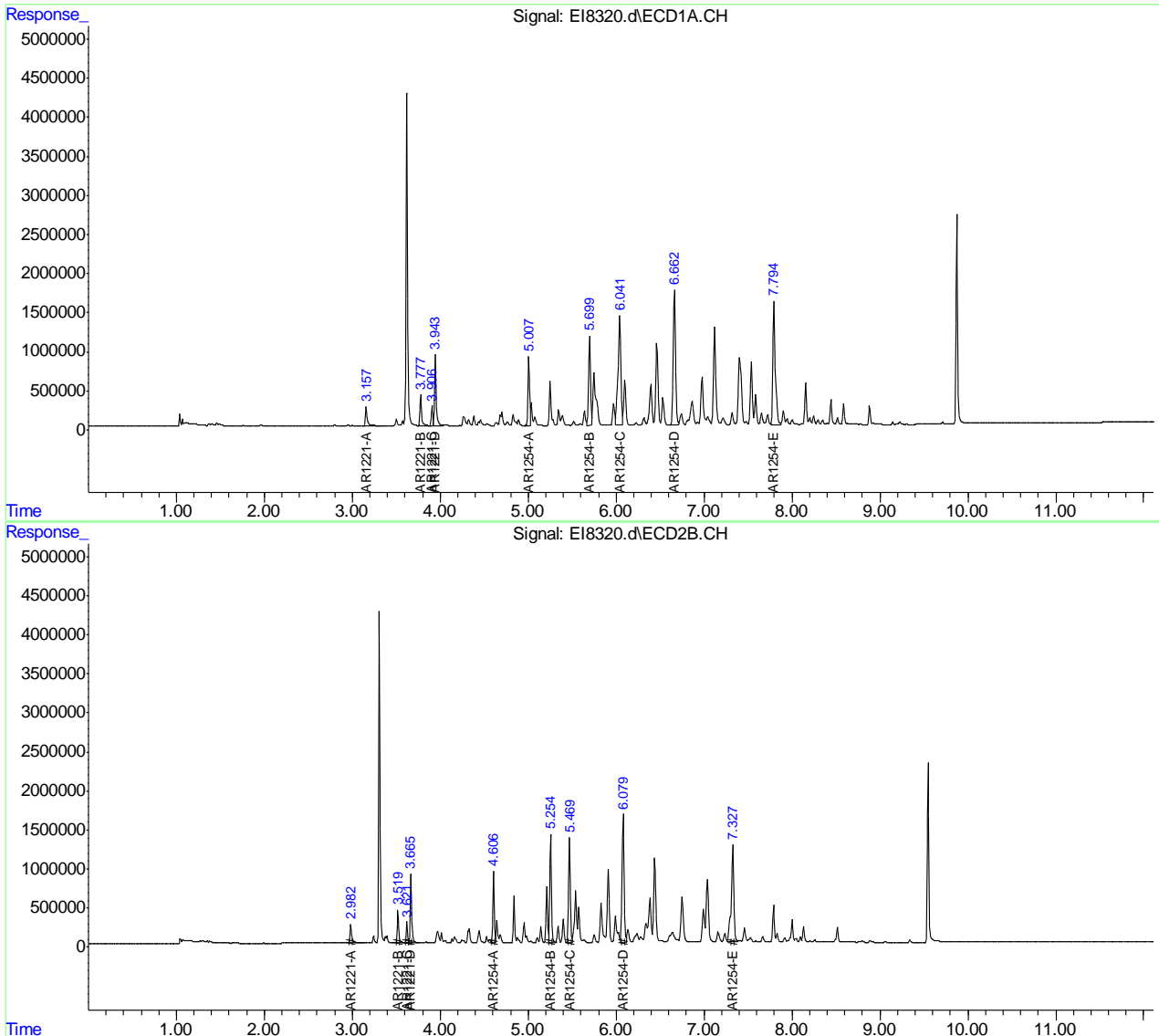


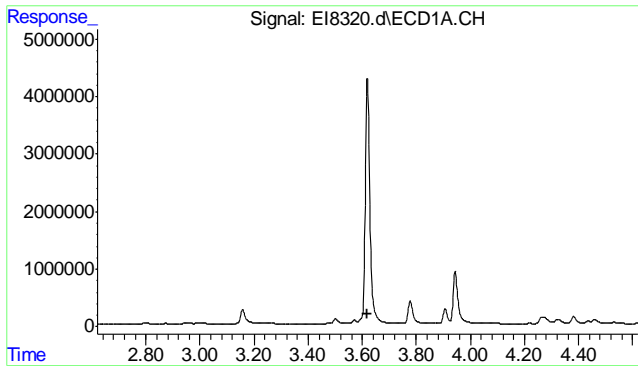
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
Data File : EI8320.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-Oct-19, 04:05:41
Operator : GRANTN
Sample : IC430-1000, 2154
Misc : OP18346,GEI430,,,,,1
ALS Vial : 30 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

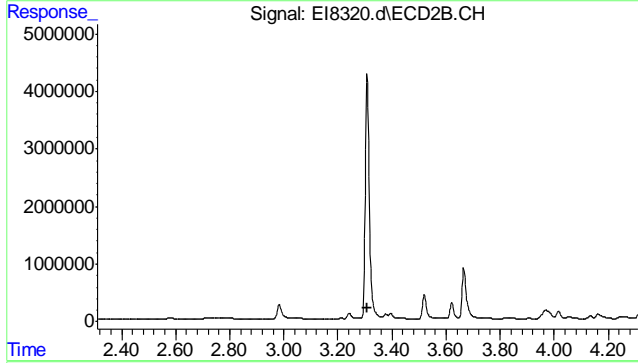
Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 07 14:31:49 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx c1 pest.columns
QLast Update : Mon Oct 07 14:27:42 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

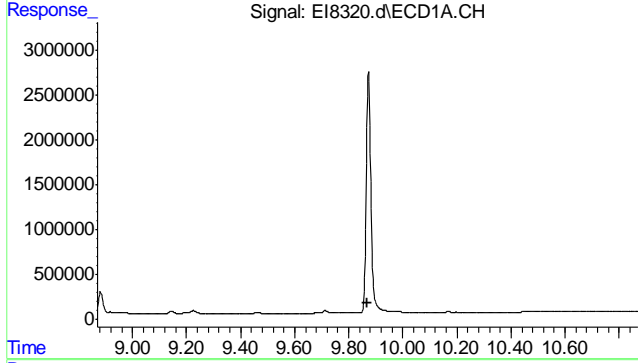




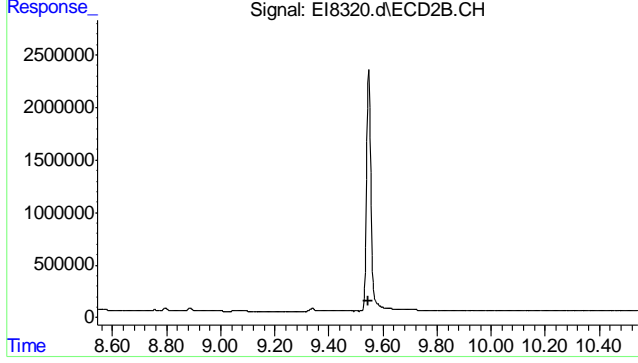
#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.620 min
 Response: 0
 Conc: N.D.



#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.310 min
 Response: 0
 Conc: N.D.

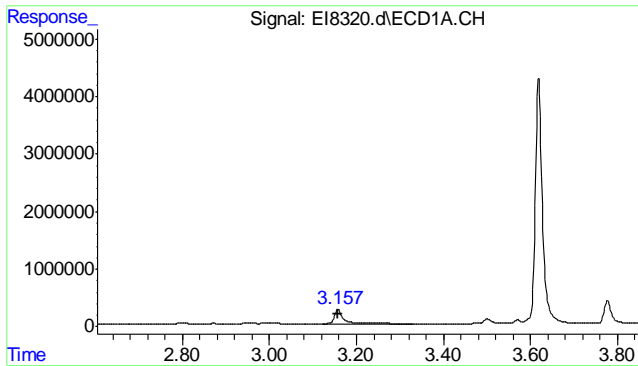


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.870 min
 Response: 0
 Conc: N.D.

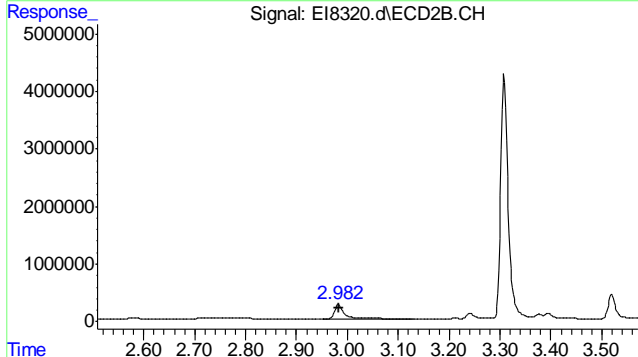


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.544 min
 Response: 0
 Conc: N.D.

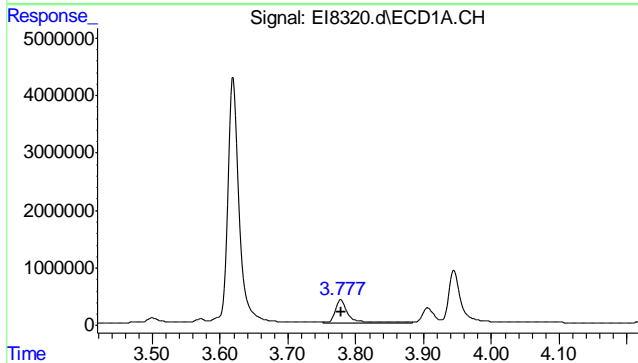
9.3.2
 9



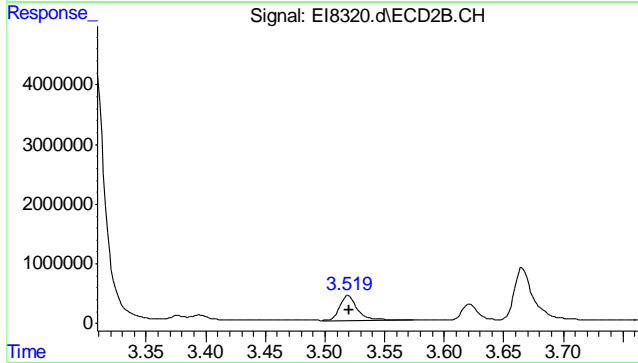
#13 AR1221-A
 R.T.: 3.158 min
 Delta R.T.: 0.000 min
 Response: 3467600
 Conc: 1000.00 ug/L



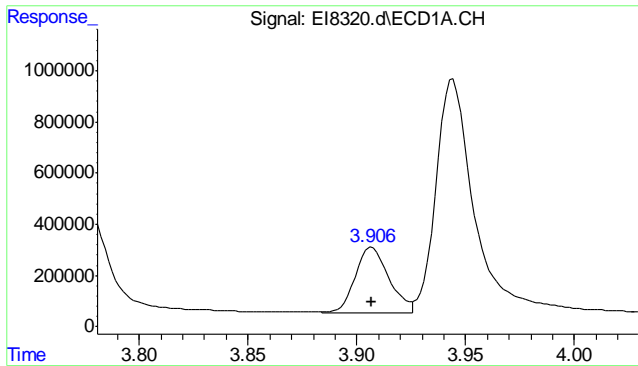
#13 AR1221-A
 R.T.: 2.983 min
 Delta R.T.: 0.000 min
 Response: 3169423
 Conc: 1000.00 ug/L



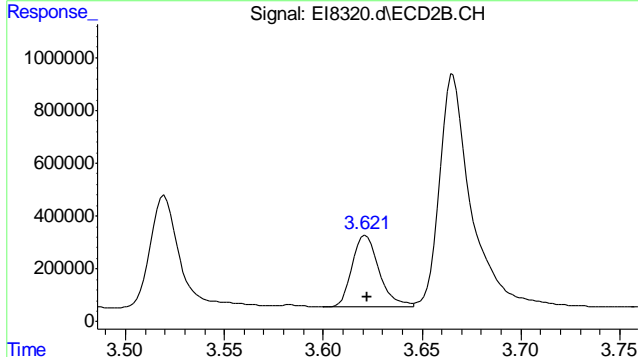
#14 AR1221-B
 R.T.: 3.778 min
 Delta R.T.: 0.000 min
 Response: 5052934
 Conc: 1000.00 ug/L



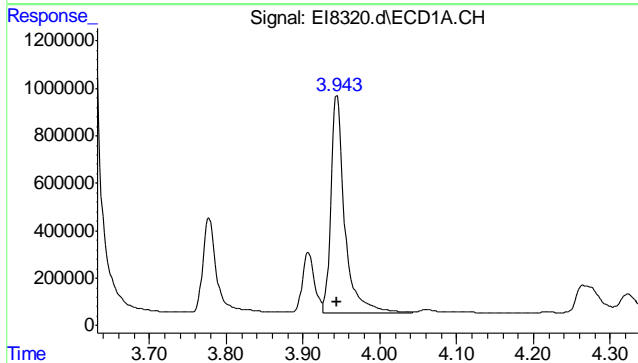
#14 AR1221-B
 R.T.: 3.520 min
 Delta R.T.: 0.000 min
 Response: 4388275
 Conc: 1000.00 ug/L



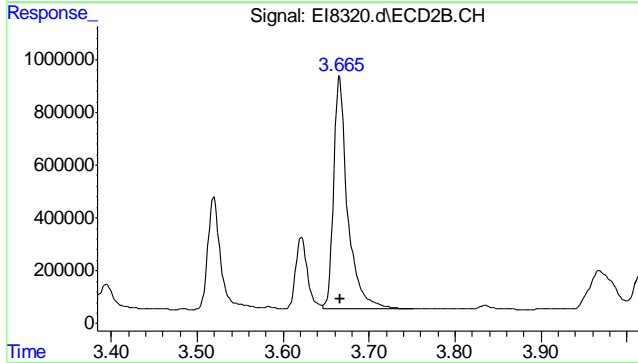
#15 AR1221-C
 R.T.: 3.907 min
 Delta R.T.: 0.000 min
 Response: 2740101
 Conc: 1000.00 ug/L



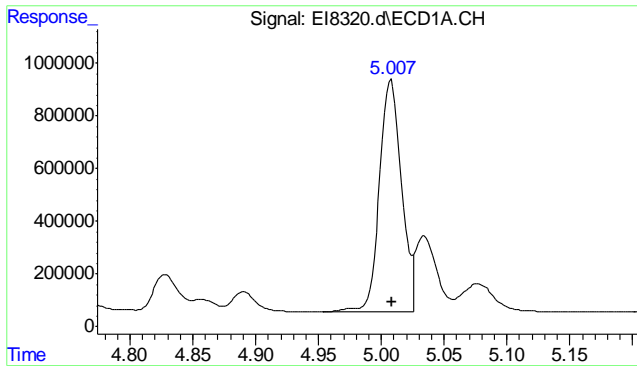
#15 AR1221-C
 R.T.: 3.622 min
 Delta R.T.: 0.000 min
 Response: 2585111
 Conc: 1000.00 ug/L



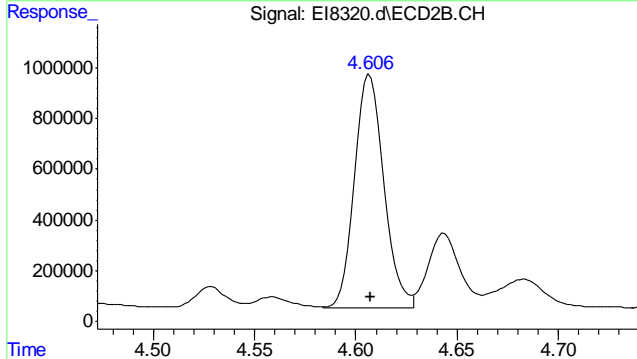
#16 AR1221-D
 R.T.: 3.944 min
 Delta R.T.: 0.000 min
 Response: 11407019
 Conc: 1000.00 ug/L



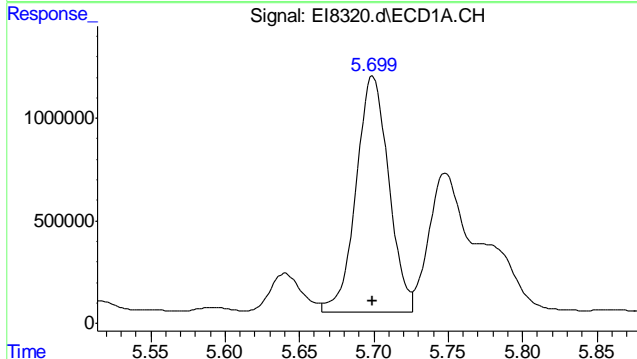
#16 AR1221-D
 R.T.: 3.666 min
 Delta R.T.: 0.000 min
 Response: 10019142
 Conc: 1000.00 ug/L



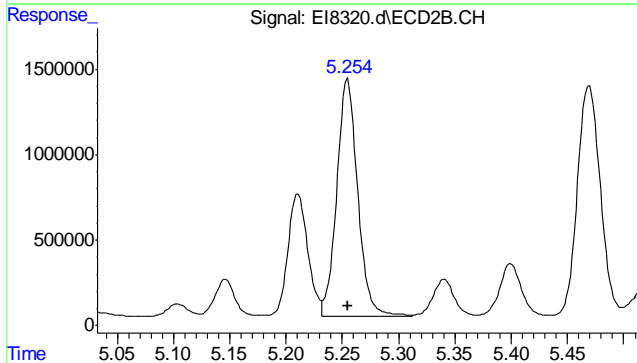
#32 AR1254-A
 R.T.: 5.008 min
 Delta R.T.: 0.000 min
 Response: 10775425
 Conc: 1000.00 ug/L



#32 AR1254-A
 R.T.: 4.607 min
 Delta R.T.: 0.000 min
 Response: 9254660
 Conc: 1000.00 ug/L

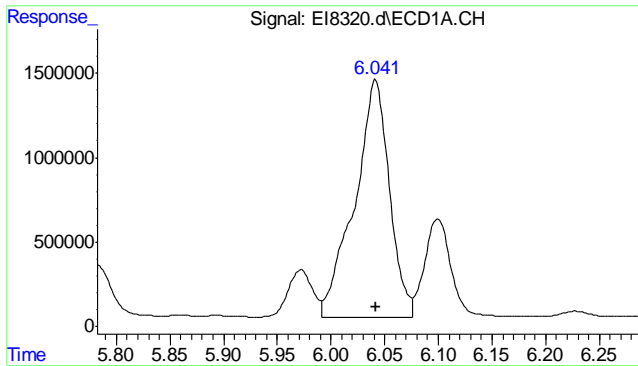


#33 AR1254-B
 R.T.: 5.699 min
 Delta R.T.: 0.000 min
 Response: 17513755
 Conc: 1000.00 ug/L

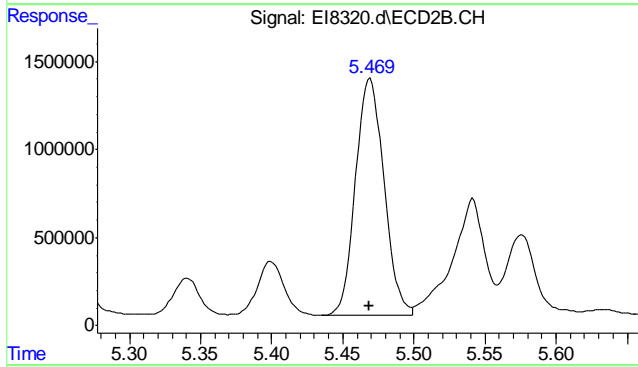


#33 AR1254-B
 R.T.: 5.255 min
 Delta R.T.: 0.000 min
 Response: 17946457
 Conc: 1000.00 ug/L

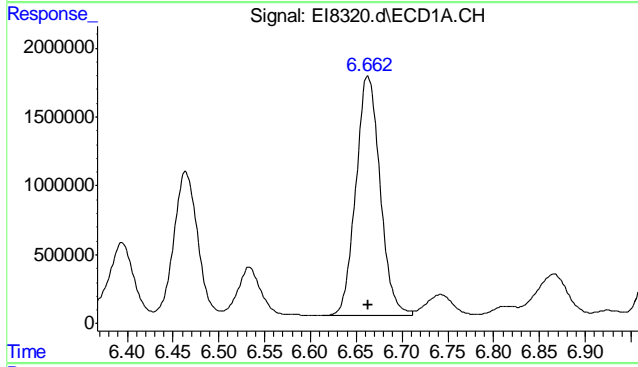
9.3.2
 9



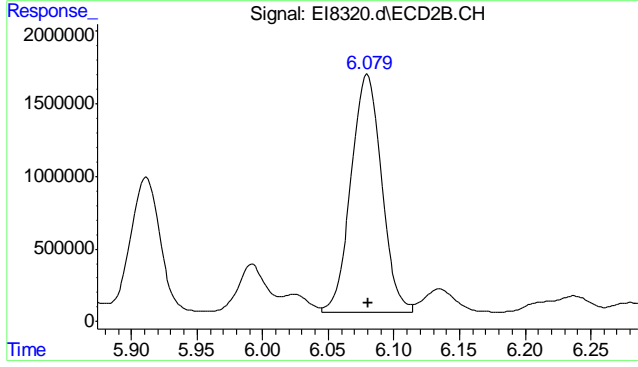
#34 AR1254-C
R.T.: 6.042 min
Delta R.T.: 0.000 min
Response: 31648897
Conc: 1000.00 ug/L



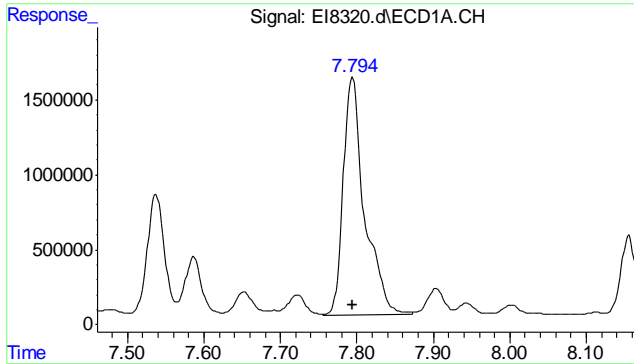
#34 AR1254-C
R.T.: 5.469 min
Delta R.T.: 0.000 min
Response: 18808901
Conc: 1000.00 ug/L



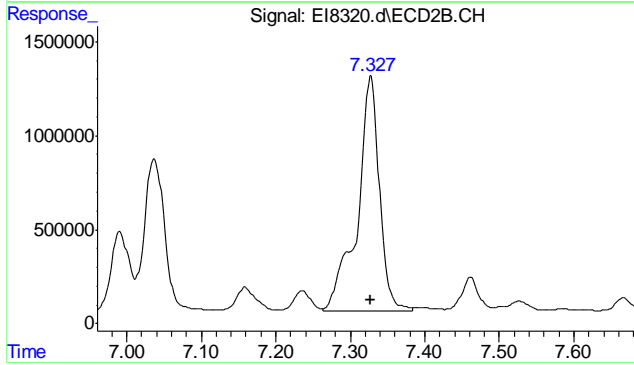
#35 AR1254-D
R.T.: 6.663 min
Delta R.T.: 0.000 min
Response: 32063213
Conc: 1000.00 ug/L



#35 AR1254-D
R.T.: 6.080 min
Delta R.T.: 0.000 min
Response: 26486111
Conc: 1000.00 ug/L



#36 AR1254-E
 R.T.: 7.794 min
 Delta R.T.: 0.000 min
 Response: 30735495
 Conc: 1000.00 ug/L



#36 AR1254-E
 R.T.: 7.327 min
 Delta R.T.: 0.000 min
 Response: 25813690
 Conc: 1000.00 ug/L

9.3.2
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8321.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 04:25:02
 Operator : GRANTN
 Sample : IC430-1000, 3262
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 31 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:32:05 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
Target Compounds						
17)	AR1232-A	3.944	3.665	13598978	12193682	1000.000
18)	AR1232-B	4.264	3.969	11110801	10557218	1000.000
19)	AR1232-C	4.702	4.331	13823753	12939545	1000.000
20)	AR1232-D	4.825	4.526	8554445	5148427	1000.000
21)	AR1232-E	5.007	4.607	4439667	4154671	1000.000
37)	AR1262-A	6.975	6.383	26553234	22966535	1000.000
38)	AR1262-B	7.402	7.453	35497478	34134935	1000.000
39)	AR1262-C	7.939	7.829	39905634	31770930	1000.000
40)	AR1262-D	8.584	8.126	71785378	59842722	1000.000
41)	AR1262-E	9.461	9.056	22978311	18253346	1000.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

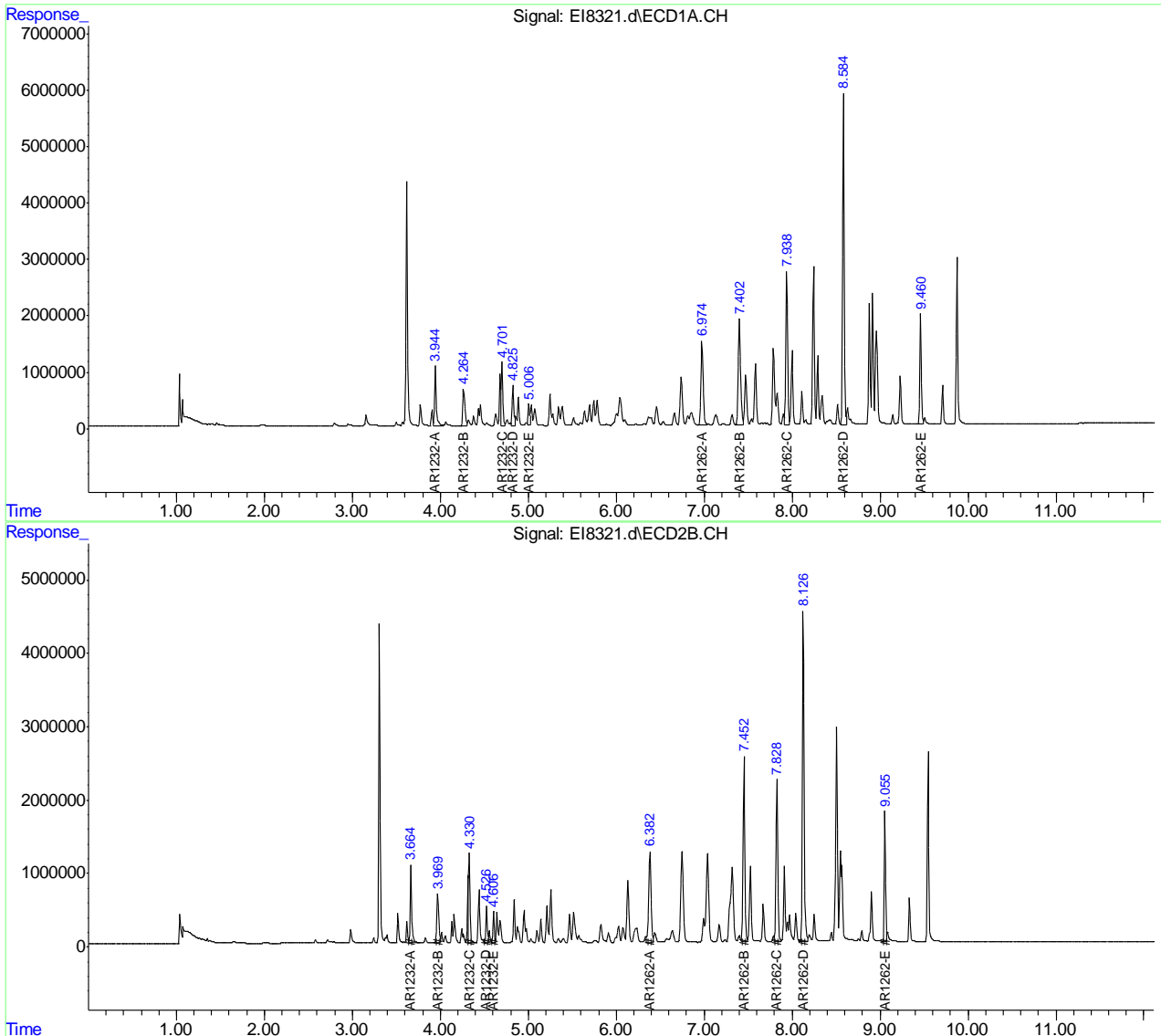


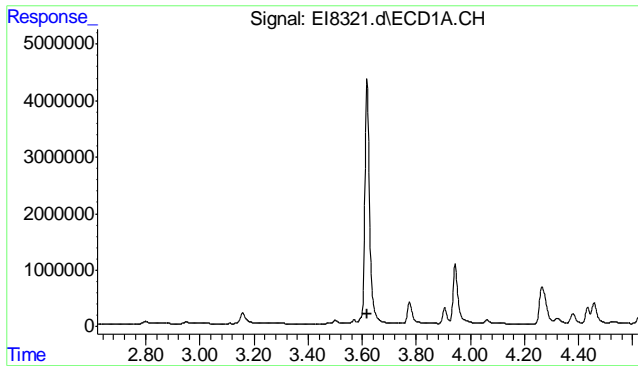
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8321.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 04:25:02
 Operator : GRANTN
 Sample : IC430-1000, 3262
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 31 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

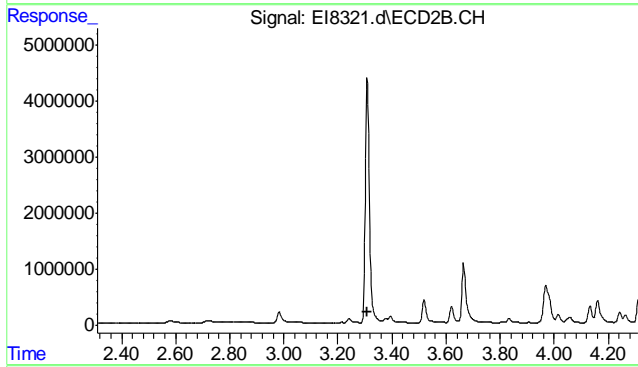
Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:32:05 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

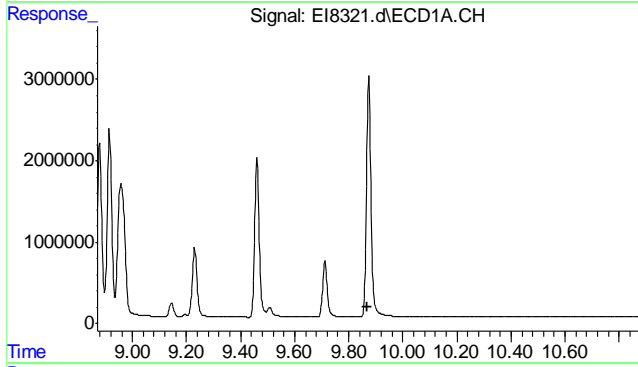




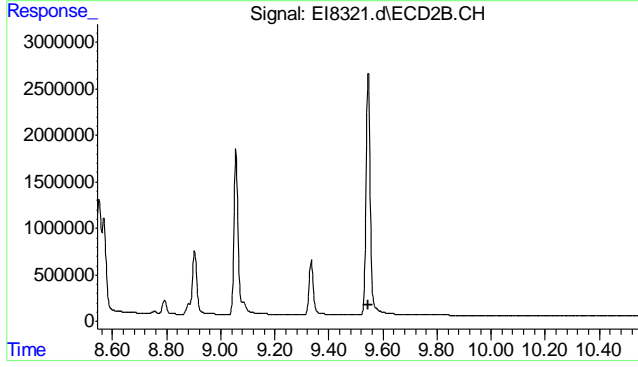
#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.620 min
 Response: 0
 Conc: N.D.



#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.310 min
 Response: 0
 Conc: N.D.

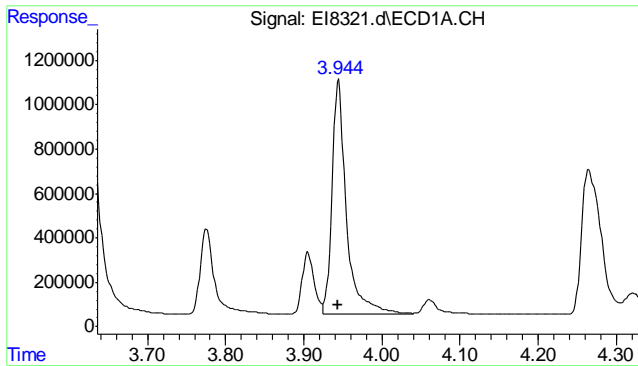


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.870 min
 Response: 0
 Conc: N.D.

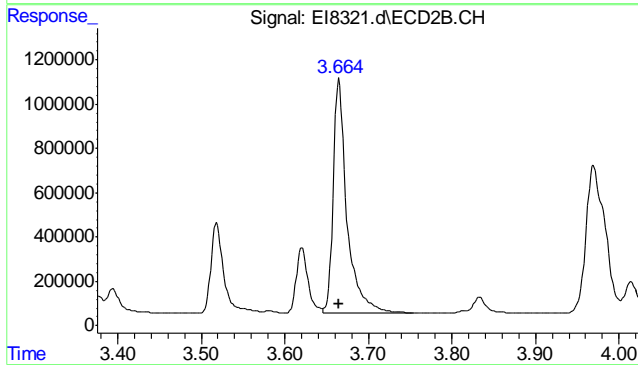


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.544 min
 Response: 0
 Conc: N.D.

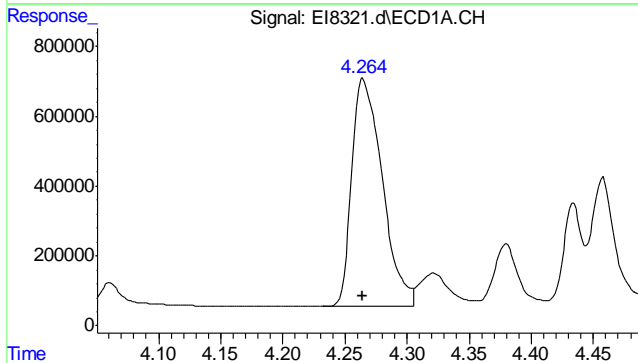
9.3.3
 9



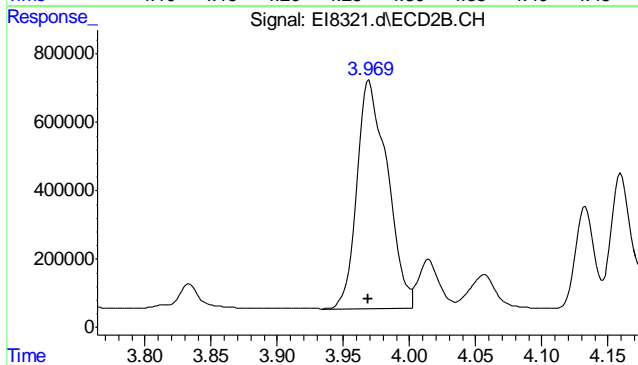
#17 AR1232-A
 R.T.: 3.944 min
 Delta R.T.: 0.000 min
 Response: 13598978
 Conc: 1000.00 ug/L



#17 AR1232-A
 R.T.: 3.665 min
 Delta R.T.: 0.000 min
 Response: 12193682
 Conc: 1000.00 ug/L

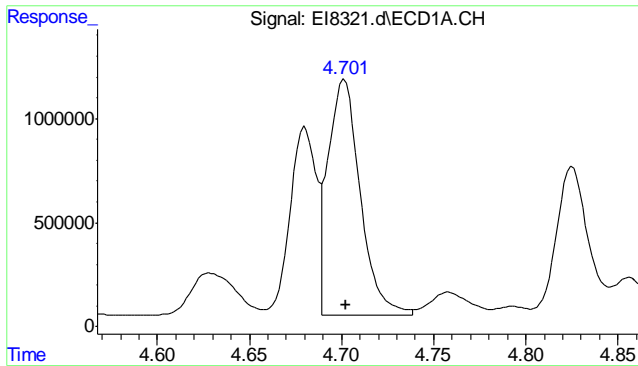


#18 AR1232-B
 R.T.: 4.264 min
 Delta R.T.: 0.000 min
 Response: 11110801
 Conc: 1000.00 ug/L

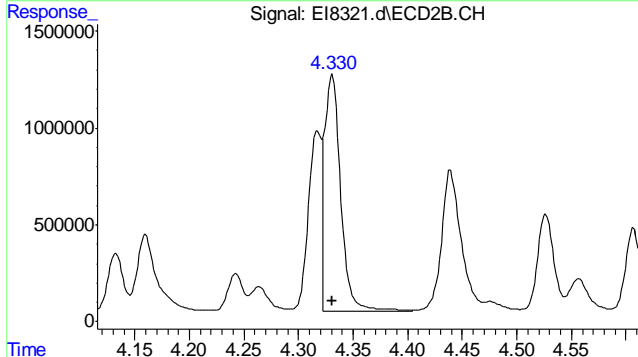


#18 AR1232-B
 R.T.: 3.969 min
 Delta R.T.: 0.000 min
 Response: 10557218
 Conc: 1000.00 ug/L

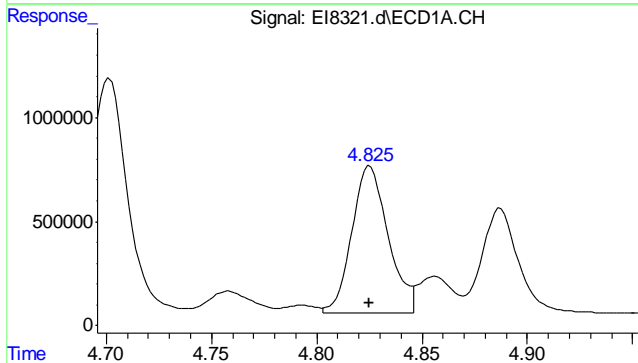
9.3.3
 9



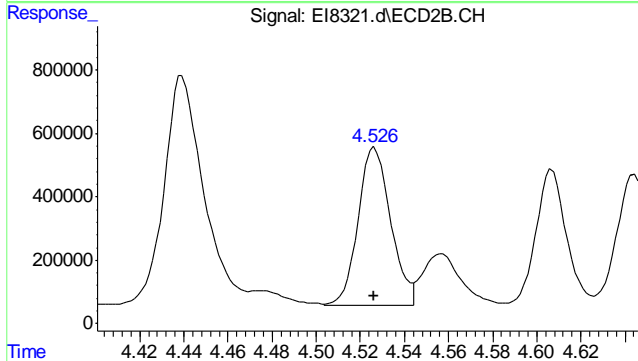
#19 AR1232-C
 R.T.: 4.702 min
 Delta R.T.: 0.000 min
 Response: 13823753
 Conc: 1000.00 ug/L



#19 AR1232-C
 R.T.: 4.331 min
 Delta R.T.: 0.000 min
 Response: 12939545
 Conc: 1000.00 ug/L

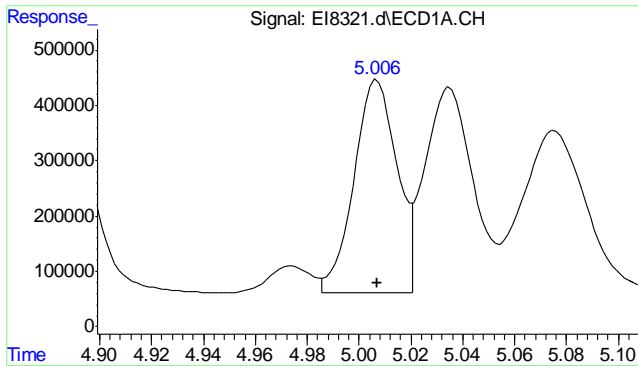


#20 AR1232-D
 R.T.: 4.825 min
 Delta R.T.: 0.000 min
 Response: 8554445
 Conc: 1000.00 ug/L

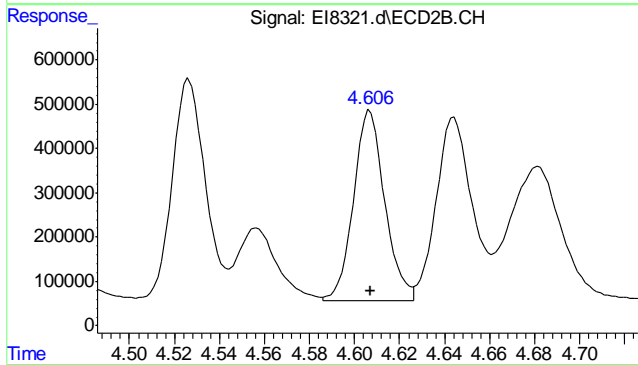


#20 AR1232-D
 R.T.: 4.526 min
 Delta R.T.: 0.000 min
 Response: 5148427
 Conc: 1006.51 ug/L

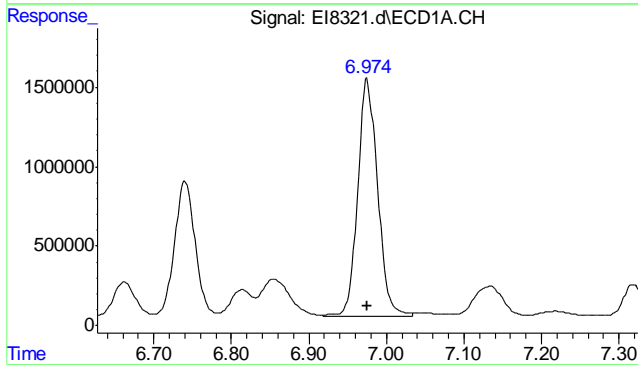
9.3.3
 9



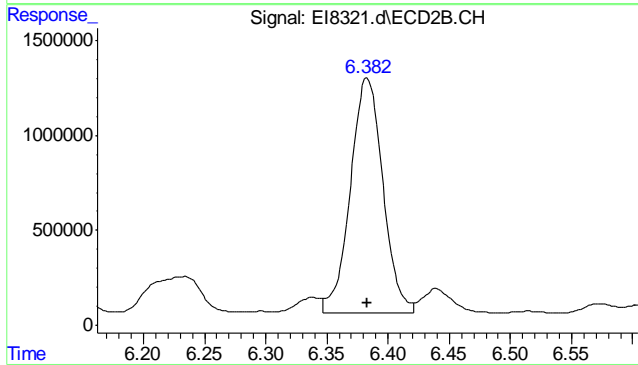
#21 AR1232-E
 R.T.: 5.007 min
 Delta R.T.: 0.000 min
 Response: 4439667
 Conc: 1000.00 ug/L



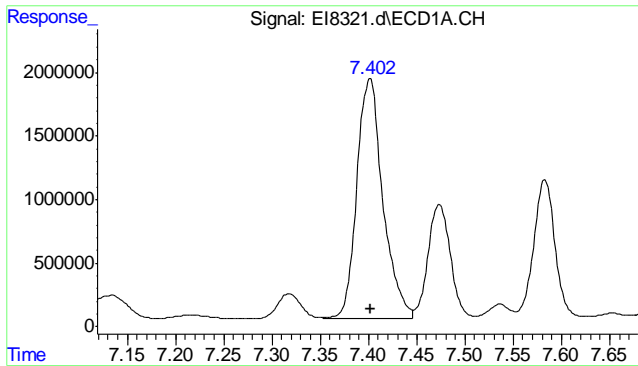
#21 AR1232-E
 R.T.: 4.607 min
 Delta R.T.: 0.000 min
 Response: 4154671
 Conc: 1000.00 ug/L



#37 AR1262-A
 R.T.: 6.975 min
 Delta R.T.: 0.000 min
 Response: 26553234
 Conc: 1000.00 ug/L

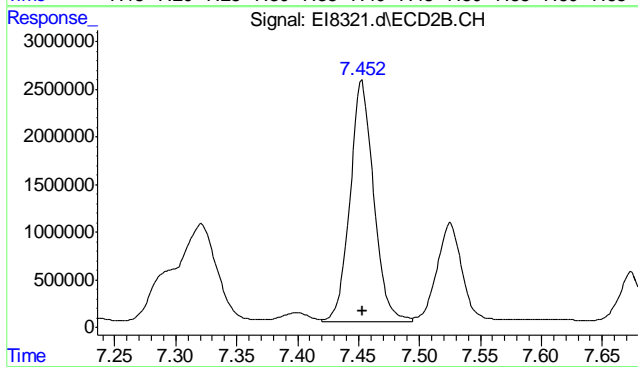


#37 AR1262-A
 R.T.: 6.383 min
 Delta R.T.: 0.000 min
 Response: 22966535
 Conc: 1000.00 ug/L



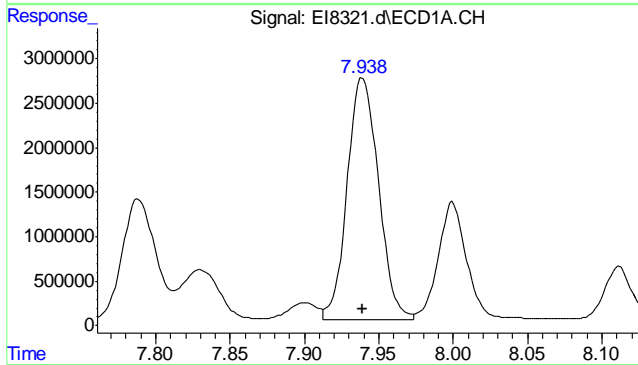
#38 AR1262-B

R.T.: 7.402 min
Delta R.T.: 0.000 min
Response: 35497478
Conc: 1000.00 ug/L



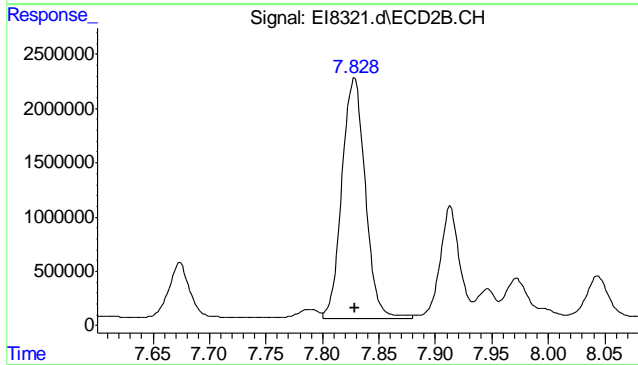
#38 AR1262-B

R.T.: 7.453 min
Delta R.T.: 0.000 min
Response: 34134935
Conc: 1000.00 ug/L



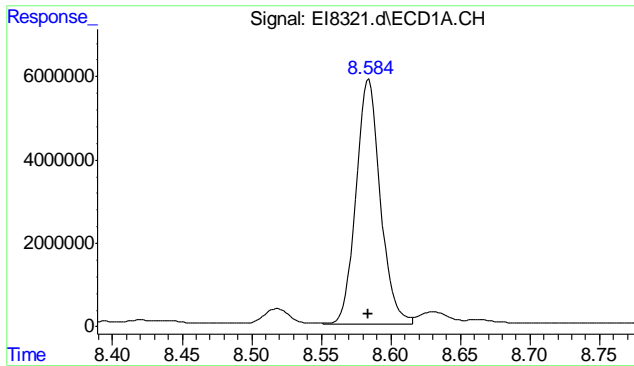
#39 AR1262-C

R.T.: 7.939 min
Delta R.T.: 0.000 min
Response: 39905634
Conc: 1000.00 ug/L

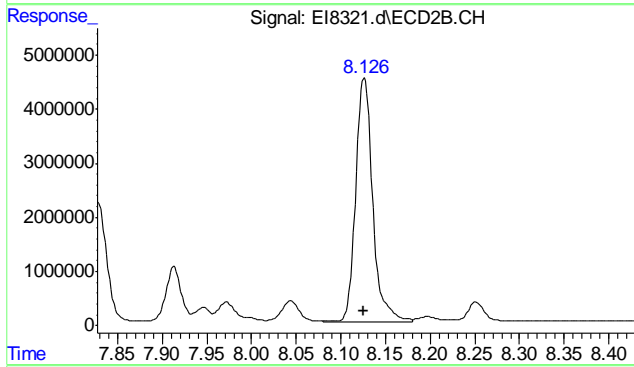


#39 AR1262-C

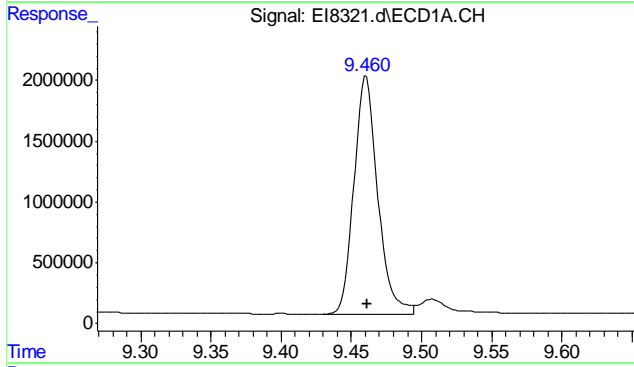
R.T.: 7.829 min
Delta R.T.: 0.000 min
Response: 31770930
Conc: 1000.00 ug/L



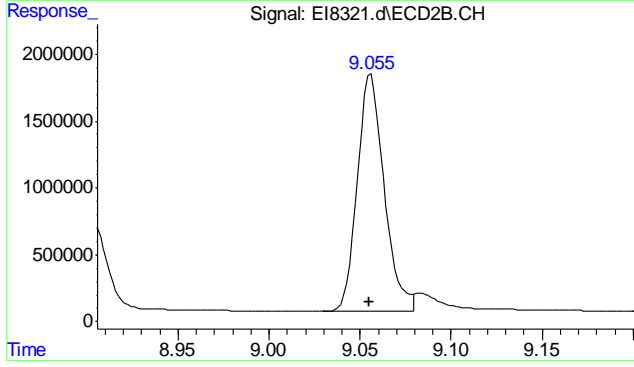
#40 AR1262-D
 R.T.: 8.584 min
 Delta R.T.: 0.000 min
 Response: 71785378
 Conc: 1000.00 ug/L



#40 AR1262-D
 R.T.: 8.126 min
 Delta R.T.: 0.000 min
 Response: 59842722
 Conc: 1000.00 ug/L



#41 AR1262-E
 R.T.: 9.461 min
 Delta R.T.: 0.000 min
 Response: 22978311
 Conc: 1000.00 ug/L



#41 AR1262-E
 R.T.: 9.056 min
 Delta R.T.: 0.000 min
 Response: 18253346
 Conc: 994.43 ug/L

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8322.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 04:44:33
 Operator : GRANTN
 Sample : IC430-1000, 4268
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 32 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:32:23 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
Target Compounds						
22)	AR1242-A	3.951	3.669	9539763	8516743	1000.000
23)	AR1242-B	4.270	3.972	17285754	15727801	1000.000
24)	AR1242-C	4.710	4.335	21916882	20140272	1000.000
25)	AR1242-D	4.832	4.531	13633561	8193499	1000.000
26)	AR1242-E	5.752	5.217	12146125	11553174	1000.000
42)	AR1268-A	8.919	8.503	70074137	58519550	1000.000
43)	AR1268-B	8.958	8.549	69446932	57622281	1000.000
44)	AR1268-C	9.148	8.791	49679710	40848924	1000.000
45)	AR1268-D	9.715	9.337	139.2E6	112.5E6	1000.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

9.3.4
9

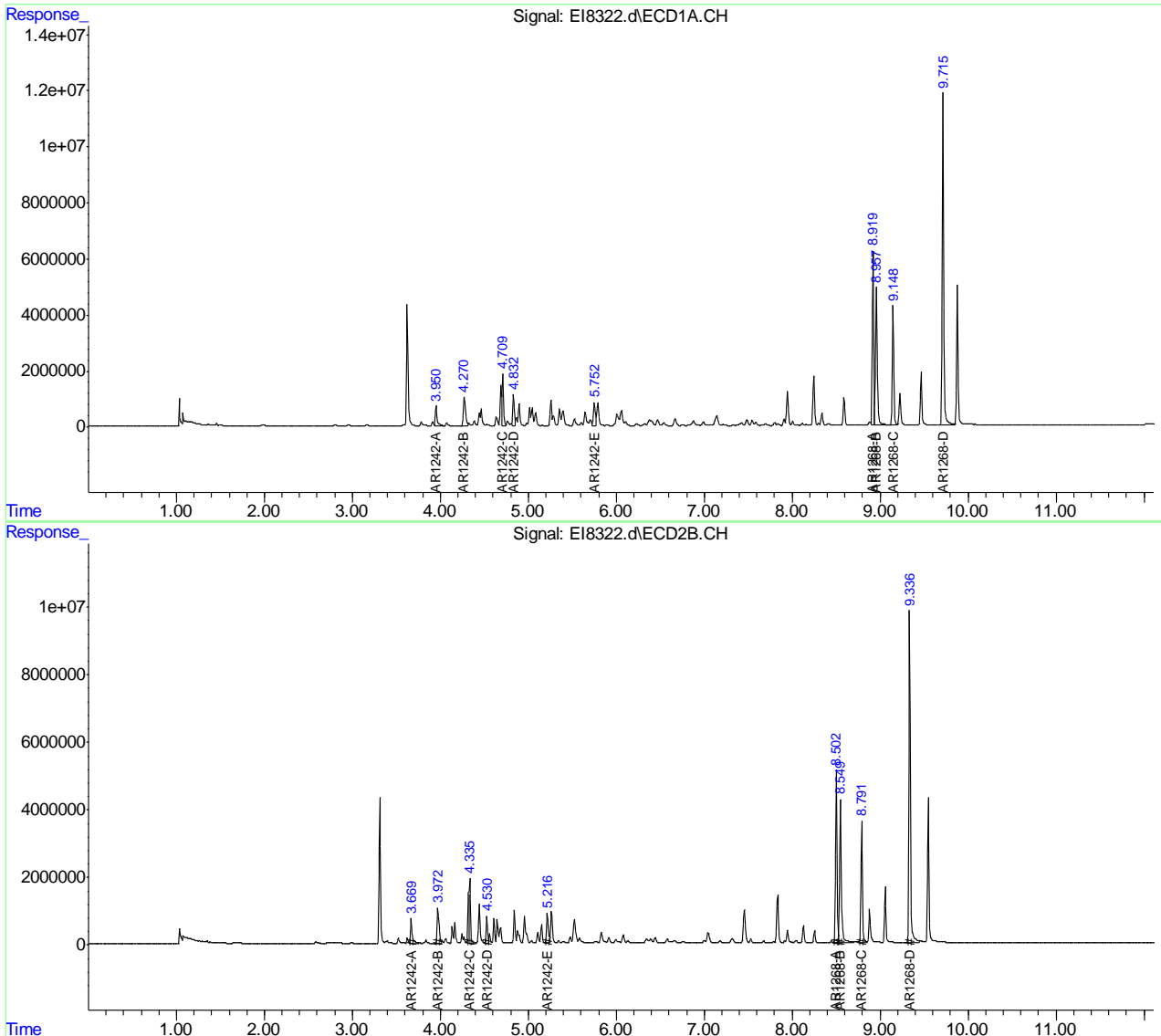


Quantitation Report (QT Reviewed)

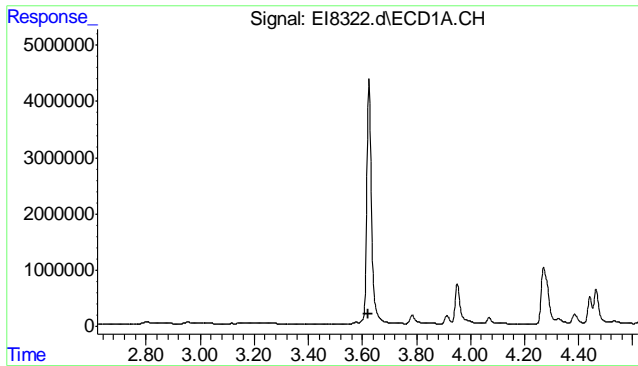
Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
Data File : EI8322.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-Oct-19, 04:44:33
Operator : GRANTN
Sample : IC430-1000, 4268
Misc : OP18346,GEI430,,,,,1
ALS Vial : 32 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 07 14:32:23 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx cl pest.columns
QLast Update : Mon Oct 07 14:27:42 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

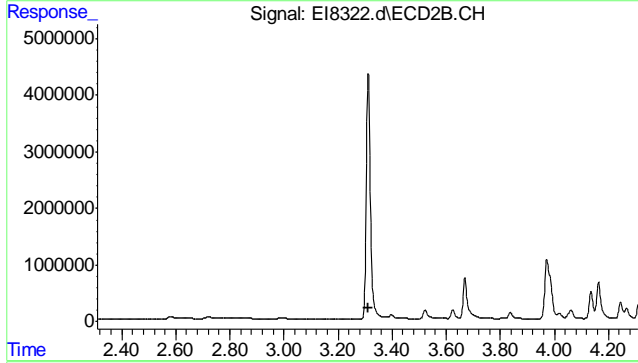
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



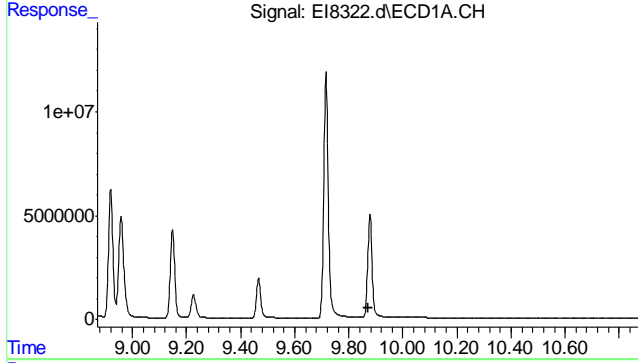
9.3.4
9



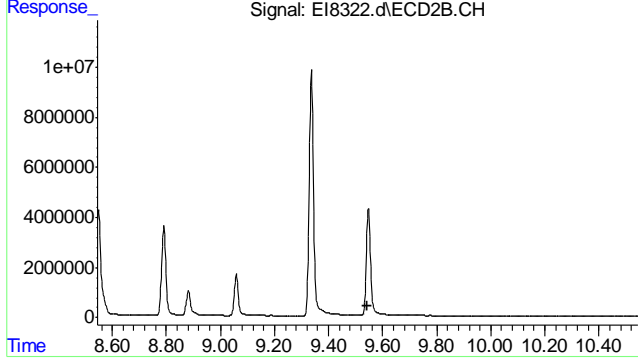
#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.620 min
 Response: 0
 Conc: N.D.



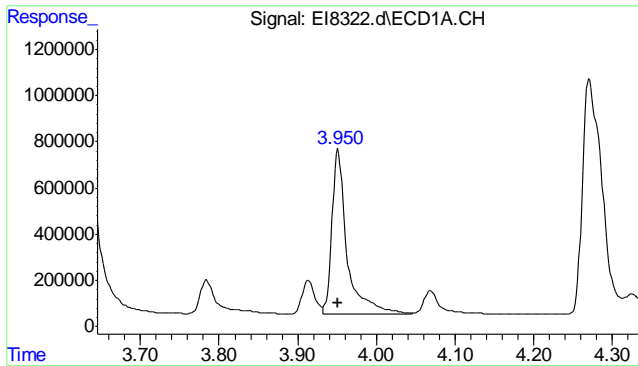
#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.310 min
 Response: 0
 Conc: N.D.



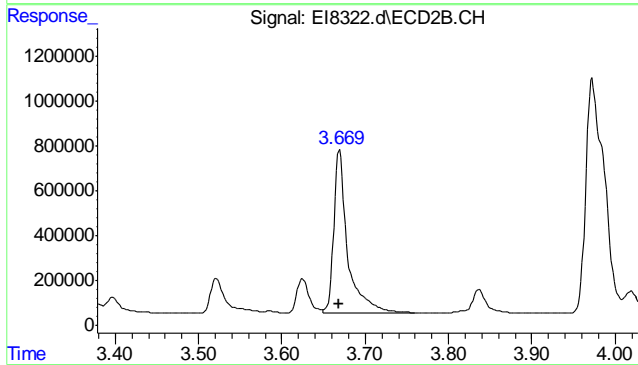
#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.870 min
 Response: 0
 Conc: N.D.



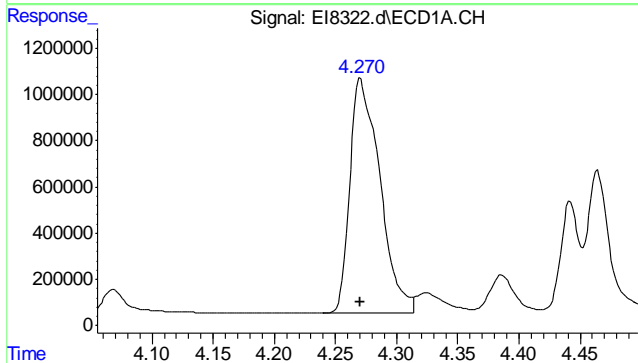
#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.544 min
 Response: 0
 Conc: N.D.



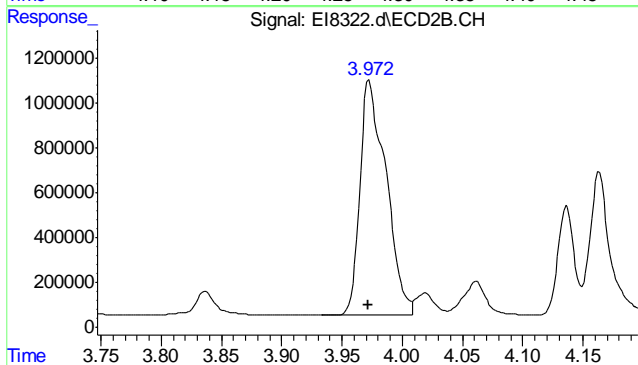
#22 AR1242-A
 R.T.: 3.951 min
 Delta R.T.: 0.000 min
 Response: 9539763
 Conc: 1000.00 ug/L



#22 AR1242-A
 R.T.: 3.669 min
 Delta R.T.: 0.000 min
 Response: 8516743
 Conc: 1000.00 ug/L

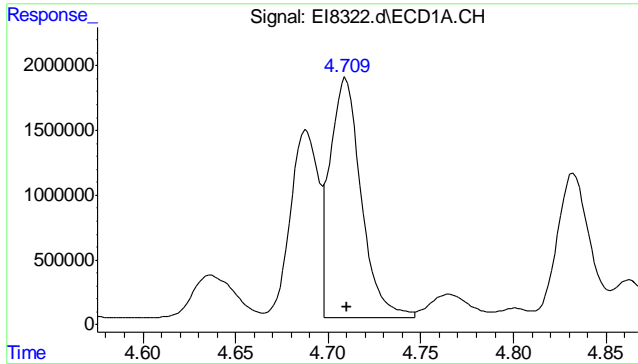


#23 AR1242-B
 R.T.: 4.270 min
 Delta R.T.: 0.000 min
 Response: 17285754
 Conc: 1000.00 ug/L

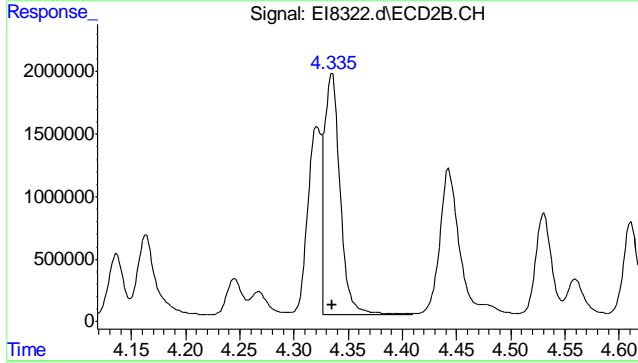


#23 AR1242-B
 R.T.: 3.972 min
 Delta R.T.: 0.000 min
 Response: 15727801
 Conc: 1000.00 ug/L

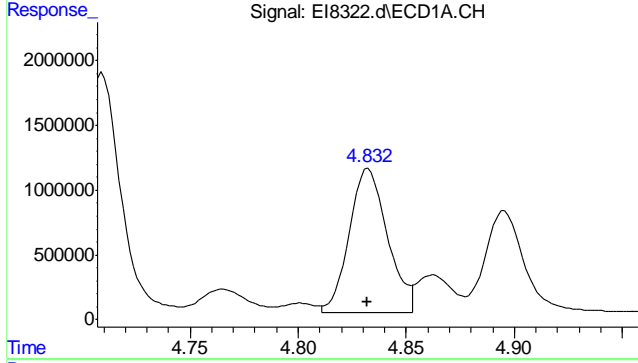
9.3.4
 9



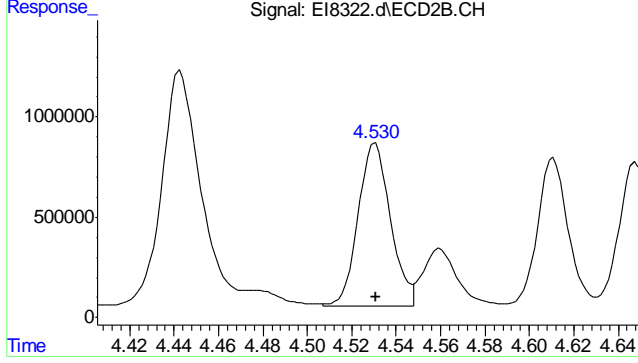
#24 AR1242-C
 R.T.: 4.710 min
 Delta R.T.: 0.000 min
 Response: 21916882
 Conc: 1000.00 ug/L



#24 AR1242-C
 R.T.: 4.335 min
 Delta R.T.: 0.000 min
 Response: 20140272
 Conc: 1000.00 ug/L

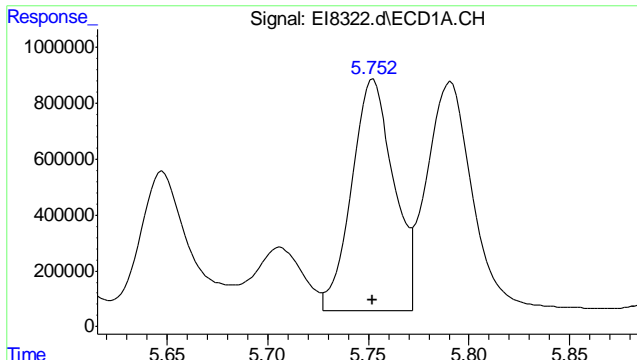


#25 AR1242-D
 R.T.: 4.832 min
 Delta R.T.: 0.000 min
 Response: 13633561
 Conc: 1000.00 ug/L



#25 AR1242-D
 R.T.: 4.531 min
 Delta R.T.: 0.000 min
 Response: 8193499
 Conc: 1000.00 ug/L

9.3.4
9



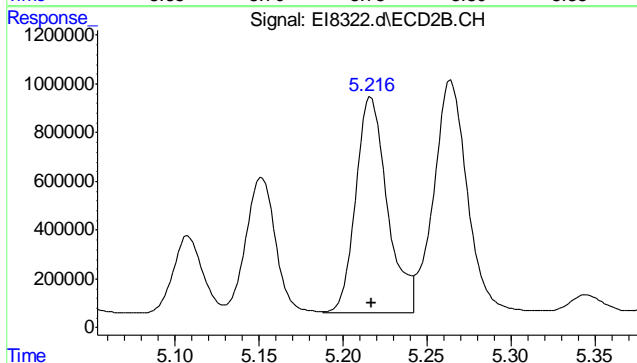
#26 AR1242-E

R.T.: 5.752 min

Delta R.T.: 0.000 min

Response: 12146125

Conc: 1000.00 ug/L



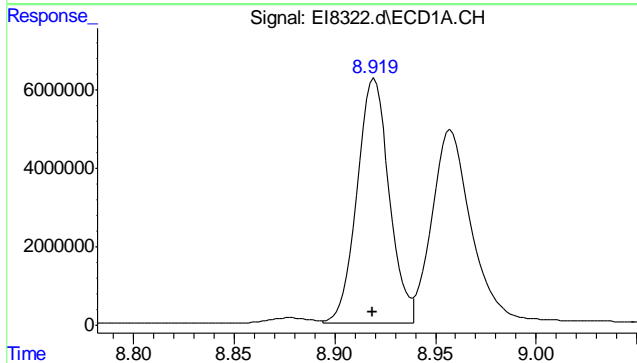
#26 AR1242-E

R.T.: 5.217 min

Delta R.T.: 0.000 min

Response: 11553174

Conc: 1000.00 ug/L



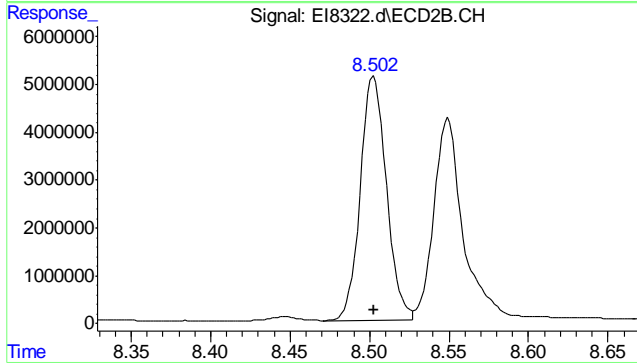
#42 AR1268-A

R.T.: 8.919 min

Delta R.T.: 0.000 min

Response: 70074137

Conc: 1000.00 ug/L



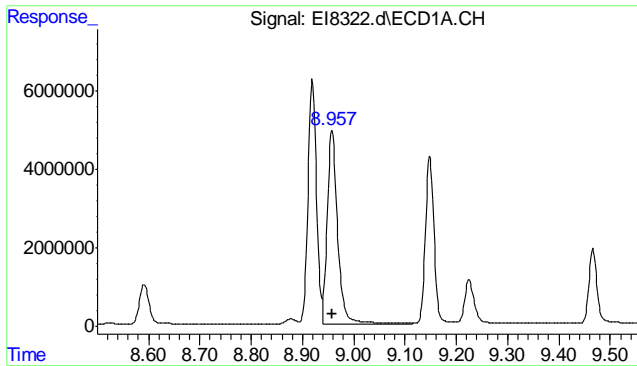
#42 AR1268-A

R.T.: 8.503 min

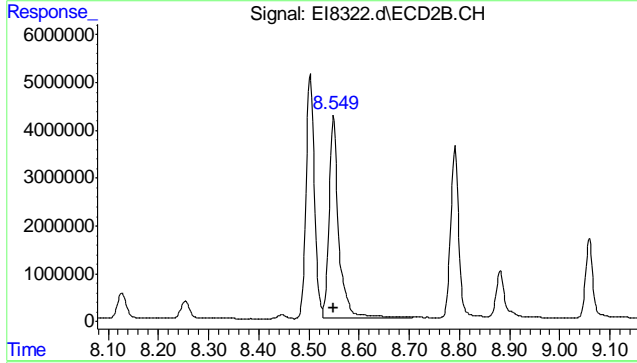
Delta R.T.: 0.000 min

Response: 58519550

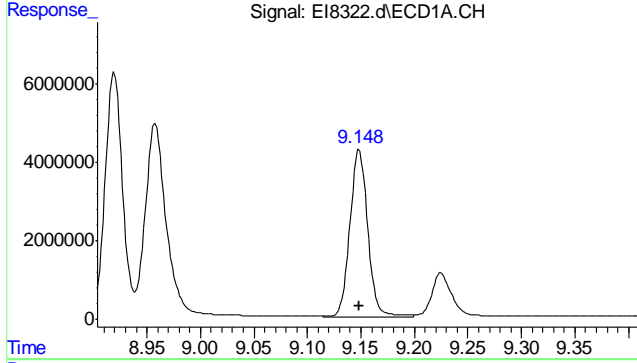
Conc: 1000.00 ug/L



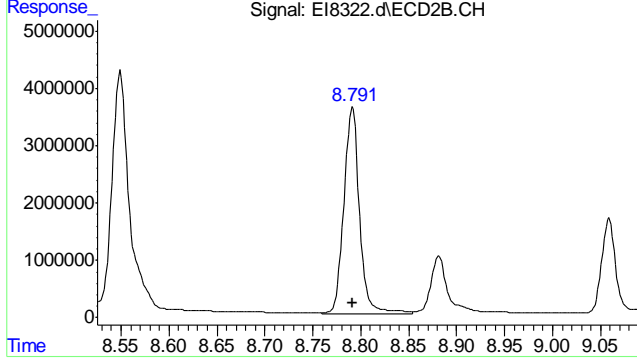
#43 AR1268-B
 R.T.: 8.958 min
 Delta R.T.: 0.000 min
 Response: 69446932
 Conc: 1000.00 ug/L



#43 AR1268-B
 R.T.: 8.549 min
 Delta R.T.: 0.000 min
 Response: 57622281
 Conc: 1000.00 ug/L

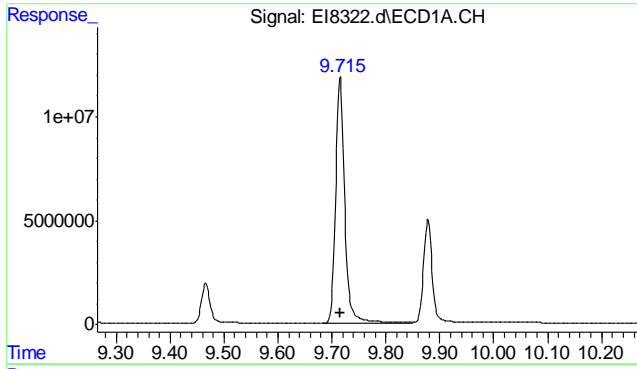


#44 AR1268-C
 R.T.: 9.148 min
 Delta R.T.: 0.000 min
 Response: 49679710
 Conc: 1000.00 ug/L

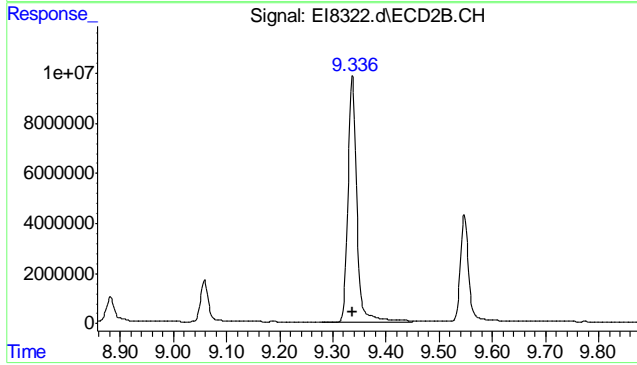


#44 AR1268-C
 R.T.: 8.791 min
 Delta R.T.: 0.000 min
 Response: 40848924
 Conc: 1000.00 ug/L

9.3.4
 9



#45 AR1268-D
 R.T.: 9.715 min
 Delta R.T.: 0.000 min
 Response: 139222518
 Conc: 1000.00 ug/L



#45 AR1268-D
 R.T.: 9.337 min
 Delta R.T.: 0.000 min
 Response: 112521276
 Conc: 1000.00 ug/L

9.3.4
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
 Data File : EI8323.d
 Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
 Acq On : 03-Oct-19, 05:03:56
 Operator : GRANTN
 Sample : IC430-1000, 48
 Misc : OP18346,GEI430,,,,,1
 ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

Integration File signal 1: PESTF.E
 Integration File signal 2: PESTR.E
 Quant Time: Oct 07 14:32:37 2019
 Quant Method : C:\msdchem\2\methods\EI-PCB430.M
 Quant Title : p8081pest/rtx cl pest.columns
 QLast Update : Mon Oct 07 14:27:42 2019
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
Target Compounds						
27)	AR1248-A	4.266	3.970	10066488	9208544	1000.000
28)	AR1248-B	4.705	4.333	13730599	12174324	1000.000
29)	AR1248-C	5.253	4.840	19810114	17399961	1000.000
30)	AR1248-D	5.788	5.261	21738073	22340745	1000.000
31)	AR1248-E	6.665	6.079	12596955	10522275	1000.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.

9.3.5
9

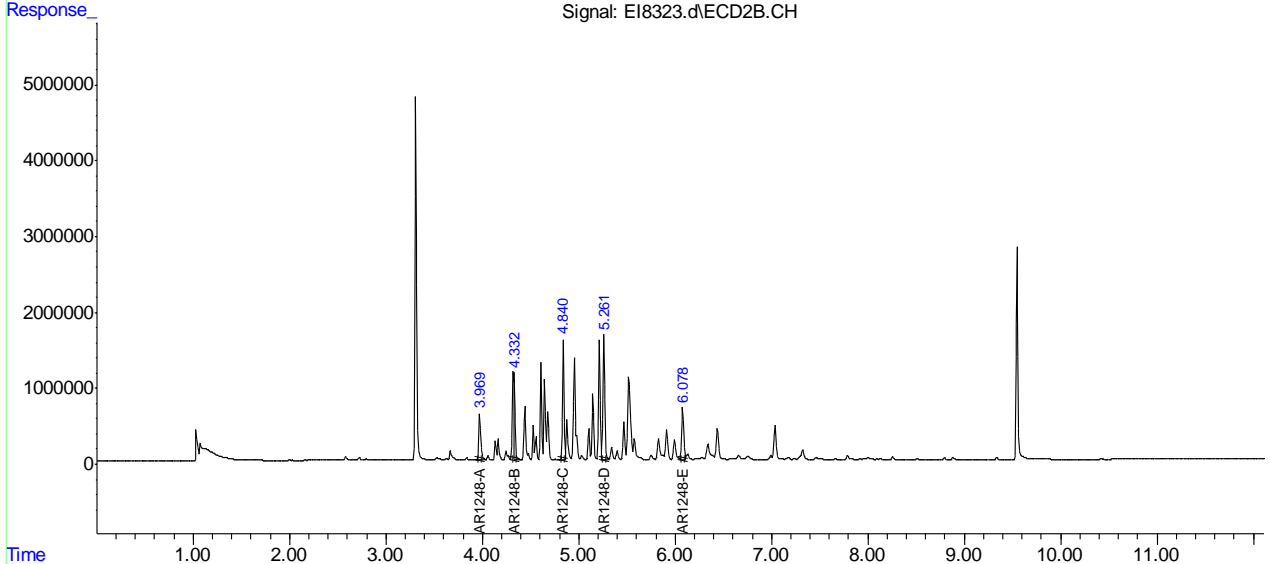
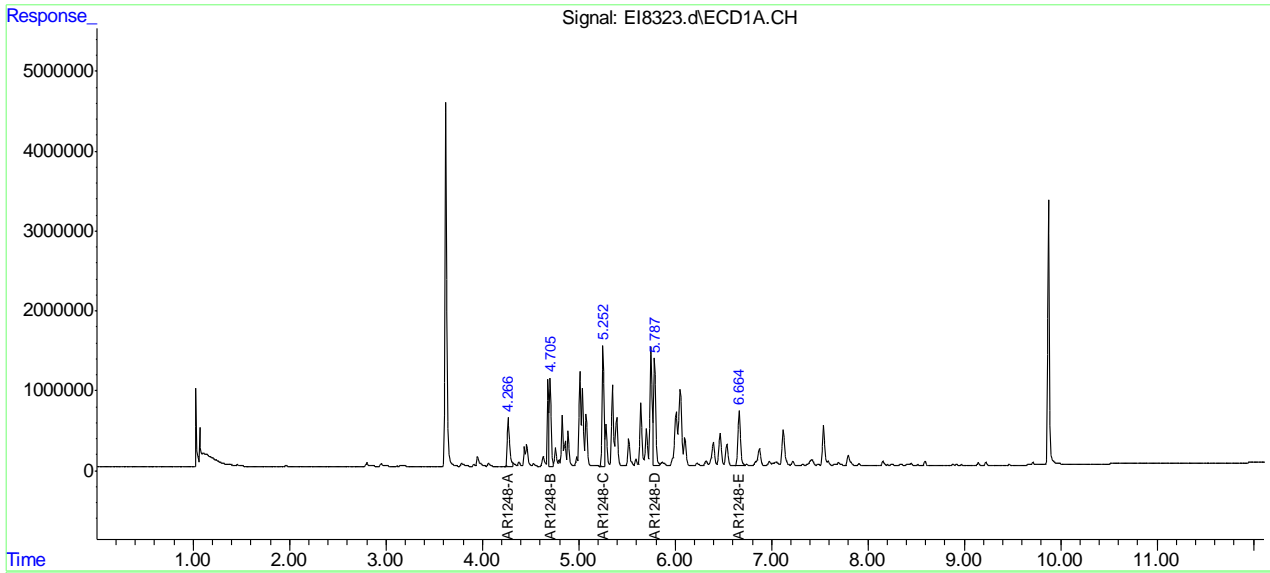


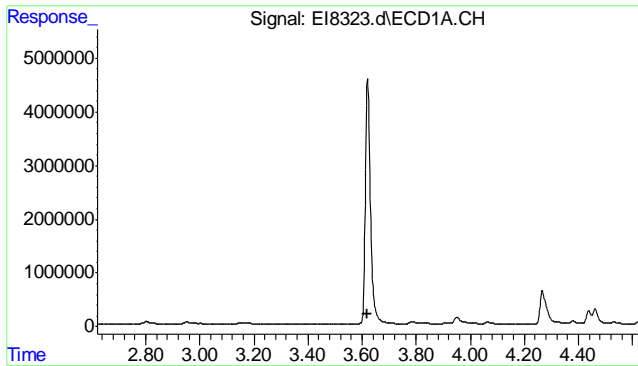
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\2019\10.2019\EI100219\
Data File : EI8323.d
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 03-Oct-19, 05:03:56
Operator : GRANTN
Sample : IC430-1000, 48
Misc : OP18346,GEI430,,,,,1
ALS Vial : 33 (Sig #1); 0 (Sig #2) Sample Multiplier: 1

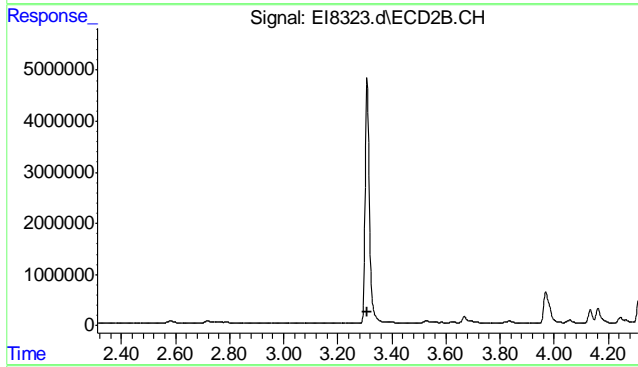
Integration File signal 1: PESTF.E
Integration File signal 2: PESTR.E
Quant Time: Oct 07 14:32:37 2019
Quant Method : C:\msdchem\2\methods\EI-PCB430.M
Quant Title : p8081pest/rtx cl pest.columns
QLast Update : Mon Oct 07 14:27:42 2019
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Small noise peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

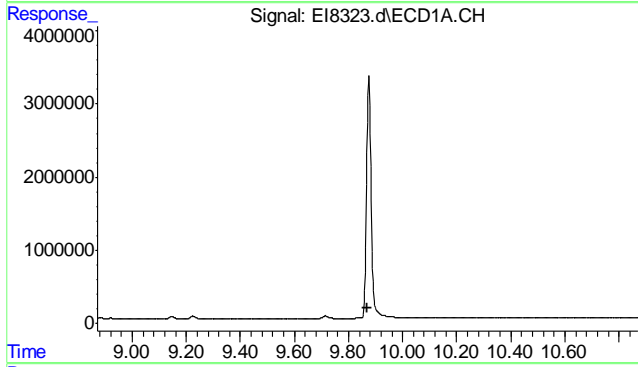




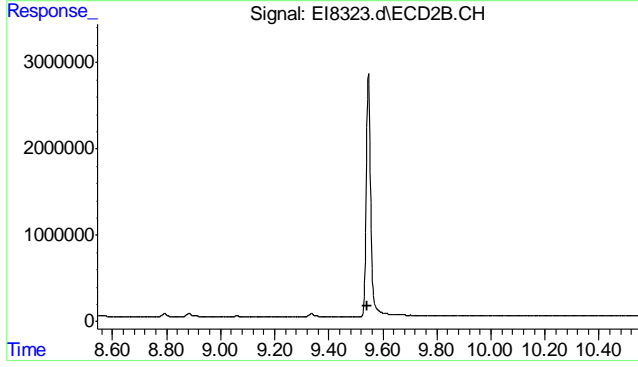
#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.620 min
 Response: 0
 Conc: N.D.



#1 TCMX
 R.T.: 0.000 min
 Exp R.T. : 3.310 min
 Response: 0
 Conc: N.D.

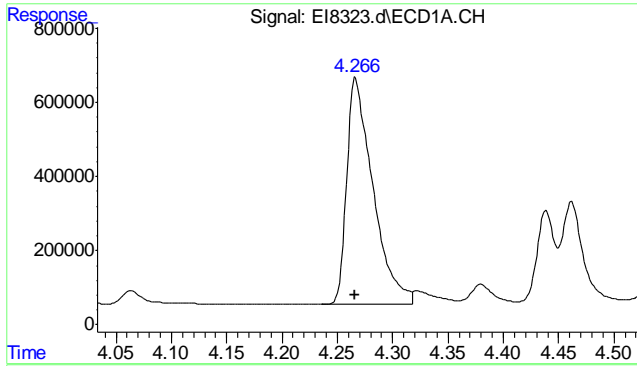


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.870 min
 Response: 0
 Conc: N.D.

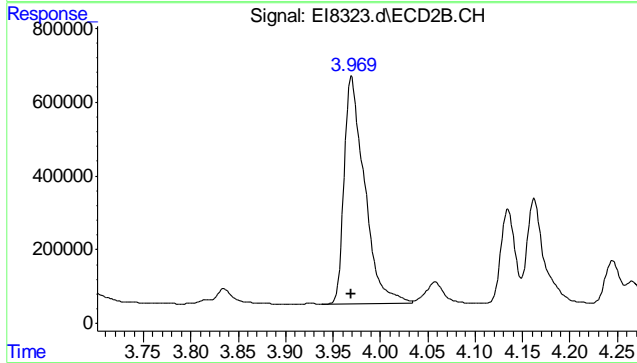


#2 Decachlorobiphenyl
 R.T.: 0.000 min
 Exp R.T. : 9.544 min
 Response: 0
 Conc: N.D.

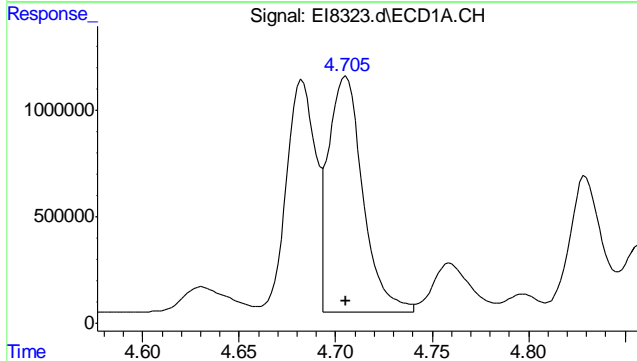
9.3.5
9



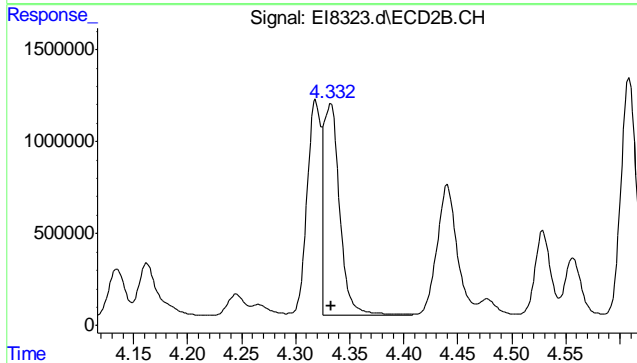
#27 AR1248-A
 R.T.: 4.266 min
 Delta R.T.: 0.000 min
 Response: 10066488
 Conc: 1000.00 ug/L



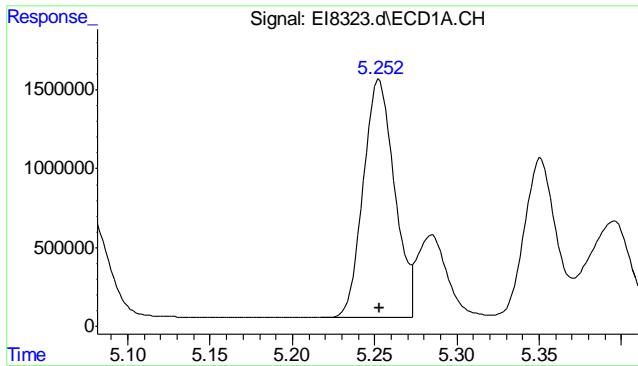
#27 AR1248-A
 R.T.: 3.970 min
 Delta R.T.: 0.000 min
 Response: 9208544
 Conc: 1000.00 ug/L



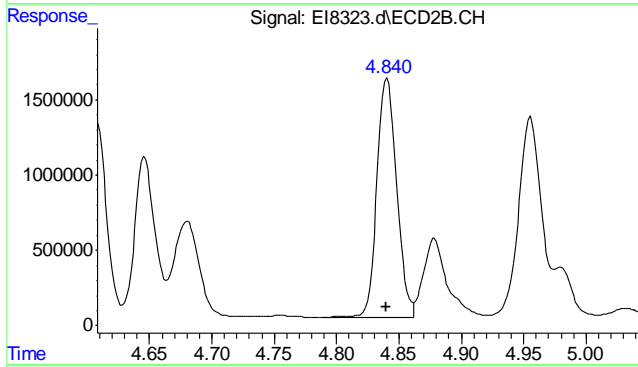
#28 AR1248-B
 R.T.: 4.705 min
 Delta R.T.: 0.000 min
 Response: 13730599
 Conc: 1000.00 ug/L



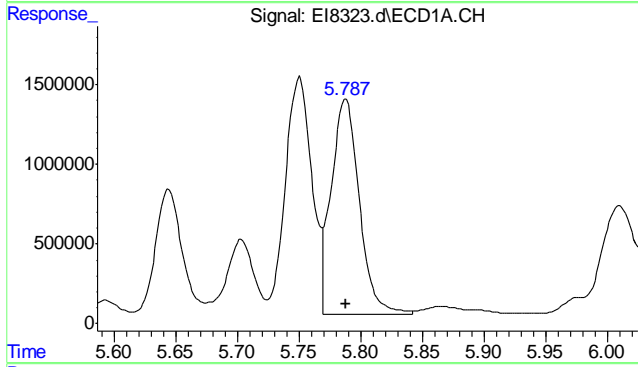
#28 AR1248-B
 R.T.: 4.333 min
 Delta R.T.: 0.000 min
 Response: 12174324
 Conc: 1000.00 ug/L



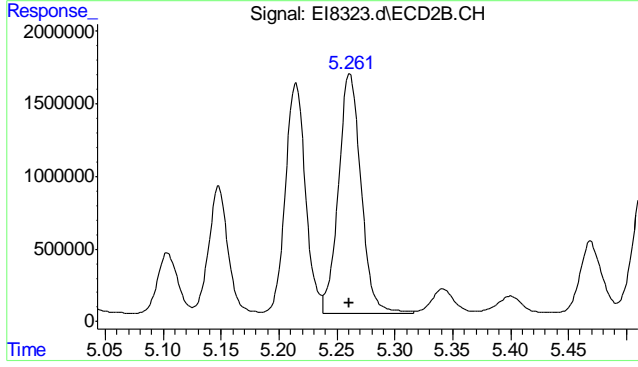
#29 AR1248-C
 R.T.: 5.253 min
 Delta R.T.: 0.000 min
 Response: 19810114
 Conc: 1000.00 ug/L



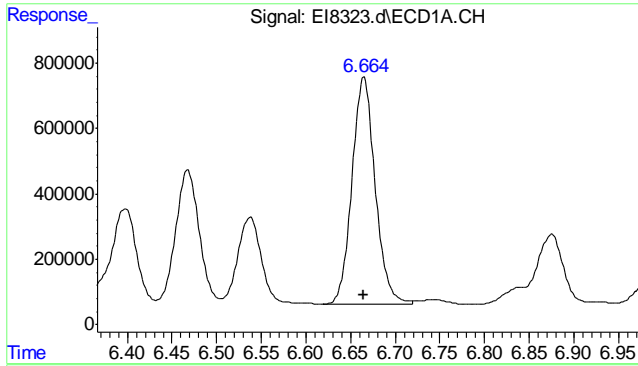
#29 AR1248-C
 R.T.: 4.840 min
 Delta R.T.: 0.000 min
 Response: 17399961
 Conc: 1000.00 ug/L



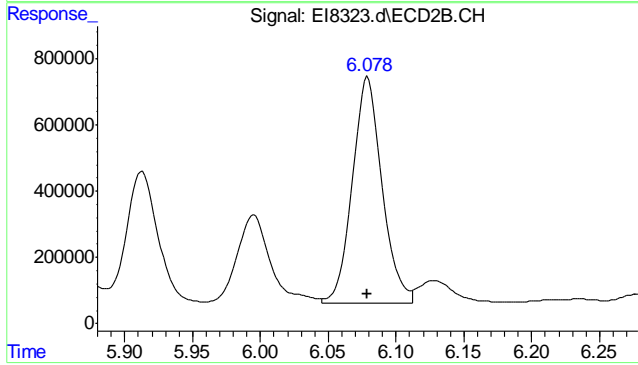
#30 AR1248-D
 R.T.: 5.788 min
 Delta R.T.: 0.000 min
 Response: 21738073
 Conc: 1000.00 ug/L



#30 AR1248-D
 R.T.: 5.261 min
 Delta R.T.: 0.000 min
 Response: 22340745
 Conc: 1000.00 ug/L



#31 AR1248-E
 R.T.: 6.665 min
 Delta R.T.: 0.000 min
 Response: 12596955
 Conc: 1000.00 ug/L



#31 AR1248-E
 R.T.: 6.079 min
 Delta R.T.: 0.000 min
 Response: 10522275
 Conc: 1000.00 ug/L

9.3.5
9

Misc. Forms

Custody Documents and Other Forms

(SGS Orlando, FL)

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
 4036 Youngfield Street, Wheat Ridge, CO 80033
 TEL: 303-425-6021 FAX: 303-425-6854
 www.sgs.com/ehsusa

Client / Reporting Information Company Name: SGS North America Inc. Street Address: 4036 Youngfield Street City: Wheat Ridge, CO 80033 Project Contact: Jeremy.dechant@sgs.com Phone #: 303-425-6021 Sampler(s) Name(s): MW		Project Information Project Name: Evening Star & Comprmise Mine RS Billing Information (if different from Report to) Project #: Client Purchase Order #: Project Manager: Attention:		Requested Analysis (see TEST CODE sheet) AG AL AS BA BE CA CD CO CR CU FE HG JK JM MN NA NI PB SB SE TL V ZN										Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank	
Turnaround Time (Business days) <input type="checkbox"/> Standard 10 Day (business) <input type="checkbox"/> 5 Business Days RUSH <input type="checkbox"/> 3 Business Days RUSH <input type="checkbox"/> 2 Business Days RUSH <input type="checkbox"/> 1 Business Day EMERGENCY <input checked="" type="checkbox"/> Other Due: 10/9/2019 <small>Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency T/A</small>		Data Deliverable Information <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> REDT1 (Level 3) <input type="checkbox"/> FULT1 (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other <input checked="" type="checkbox"/> CC <small>Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data</small>										Comments / Special Instructions			
Sample Custody must be documented below each time samples change possession, including courier delivery.															
Relinquished by Sampler: JAL Date/Time: 10/7/19		Received By: FX Date/Time:		Relinquished By: FX Date/Time:		Received By: FEWAH Date/Time: 10/9/19 900		Custody Seal #: <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Preserved Where applicable: <input type="checkbox"/> On Ice <input type="checkbox"/> Cooler Temp. 1.8							

10.1 10

DA20878: Chain of Custody
 Page 1 of 2
 SGS Orlando, FL



SGS Sample Receipt Summary

Job Number: DA20878

Client: SGS CO

Project: EVENING STAR & COMPROMISE MINE RS

Date / Time Received: 10/9/2019 9:00:00 AM

Delivery Method: FX

Airbill #s: _____

Therm ID: IR 1;

Therm CF: 1;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.8);

Cooler Temps (Corrected) °C: Cooler 1: (1.8);

Cooler Information

Y or N

- | | | |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Cooler temp verification | <u>IR Gun</u> | |
| 5. Cooler media | <u>Ice (Bag)</u> | |

Sample Information

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Samples preserved properly | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Condition of sample | <u>Intact</u> | | |
| 5. Sample recvd within HT | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 6. Dates/Times/IDs on COC match Sample Label | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 7. VOCs have headspace | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 9. Compositing instructions clear | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Trip Blank Information

Y or N N/A

- | | | | |
|--------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <u>W or S</u> | | <u>N/A</u> |
| 3. Type Of TB Received | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____
 Test Strip Lot #: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____
 Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: PETERH

Date: 10/9/2019 9:00:00 AM

Reviewer: _____

Date: _____

DA20878: Chain of Custody

Page 2 of 2

10.1 10



Metals Analysis

QC Data Summaries

(SGS Orlando, FL)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA20878
Account: ALMS - SGS Wheat Ridge, CO
Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36236
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 10/10/19

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.042	.0025	.0042	0.0079	<0.042

Associated samples MP36236: DA20878-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

11.11
11

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36236
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 10/10/19 10/10/19

Metal	FA68729-1		QC Limits	FA68729-1		Spikelot HGFLWS1	% Rec	QC Limits
	Original	DUP		RPD	Original			
Mercury	0.013	0.014	7.4	0-20	0.013 0.29	0.276	100.5	80-120

Associated samples MP36236: DA20878-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

11.12
11

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36236
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 10/10/19

Metal	FA68729-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.013	0.33	0.303	104.7	12.9
					20

Associated samples MP36236: DA20878-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

11.12
11

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA20878
Account: ALMS - SGS Wheat Ridge, CO
Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36236
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 10/10/19

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP36236: DA20878-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA20878
Account: ALMS - SGS Wheat Ridge, CO
Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36236
Matrix Type: SOLID

Methods: SW846 7471B
Units: ug/l

Prep Date: 10/10/19

Metal	FA68729-1	Original	SDL 1:5	%DIF	QC Limits
-------	-----------	----------	---------	------	-----------

Mercury 0.141 0.00 100.0(a) 0-10

Associated samples MP36236: DA20878-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA20878
Account: ALMS - SGS Wheat Ridge, CO
Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 10/10/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8	0.30	<10
Antimony	1.0	.05	.065	0.12	<1.0
Arsenic	0.50	.065	.1	-0.065	<0.50
Barium	10	.05	.05	-0.010	<10
Beryllium	0.25	.01	.025	-0.0050	<0.25
Cadmium	0.20	.01	.025	-0.0050	<0.20
Calcium	250	2.5	2.5	1.0	<250
Chromium	0.50	.05	.05	0.025	<0.50
Cobalt	2.5	.01	.025	0.0	<2.5
Copper	1.3	.05	.05	0.015	<1.3
Iron	15	.85	.85	1.6	<15
Lead	1.0	.05	.05	-0.020	<1.0
Magnesium	250	1.8	1.8	1.2	<250
Manganese	0.75	.025	.025	0.010	<0.75
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025	0.0	<2.0
Potassium	500	10	10	4.2	<500
Selenium	1.0	.12	.12	0.050	<1.0
Silver	0.50	.035	.041	-0.025	<0.50
Sodium	500	25	25	1.7	<500
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055	-0.11	<0.50
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025	0.0	<2.5
Zinc	1.0	.15	.15	0.13	<1.0

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

11.21
11

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/10/19 10/10/19

Metal	FA68788-1 Original DUP		RPD	QC Limits	FA68788-1 Original MS		Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	943	635 (a)	39.0*(b)	0-20	943	1920 (a)	1170	83.8	80-120
Antimony	0.90	0.0 (c)	200.0(d)	0-20	0.90	17.0 (c)	21.6	74.5N(e)	80-120
Arsenic	1.7	0.78 (a)	74.2 (d)	0-20	1.7	88.3 (a)	86.4	100.2	80-120
Barium	20.3	19.4 (a)	4.5	0-20	20.3	104 (a)	86.4	96.9	80-120
Beryllium	0.0	0.0 (a)	NC	0-20	0.0	2.1 (a)	2.16	97.2	80-120
Cadmium	0.0	0.0 (c)	NC	0-20	0.0	2.2 (c)	2.16	101.9	80-120
Calcium	288000	327000	12.7	0-20	288000	285000	1080	-277.8(f)	80-120
Chromium	5.0	6.0 (c)	18.2	0-20	5.0	14.3 (c)	8.64	107.6	80-120
Cobalt	0.33	0.28 (a)	16.4	0-20	0.33	20.3 (a)	21.6	92.5	80-120
Copper	0.79	0.59 (a)	29.0 (d)	0-20	0.79	11.2 (a)	10.8	96.4	80-120
Iron	884	764 (a)	14.6	0-20	884	1830 (a)	1120	84.2	80-120
Lead	0.97	0.0 (c)	200.0(d)	0-20	0.97	23.5 (c)	21.6	104.3	80-120
Magnesium	5840	6390 (a)	9.0	0-20	5840	7510 (a)	1080	154.6(f)	80-120
Manganese	25.5	23.2 (a)	9.4	0-20	25.5	45.1 (a)	21.6	90.7	80-120
Molybdenum									
Nickel	2.0	1.2 (a)	50.0 (d)	0-20	2.0	21.8 (a)	21.6	91.7	80-120
Potassium	219	204 (a)	7.1	0-20	219	1250 (a)	1080	95.5	80-120
Selenium	0.0	0.0 (c)	NC	0-20	0.0	93.7 (c)	86.4	108.5	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	2.1 (a)	2.16	97.2	80-120
Sodium	1310	1680 (a)	24.7 (d)	0-20	1310	2520 (a)	1080	112.0	80-120
Strontium									
Thallium	0.0	0.0 (c)	NC	0-20	0.0	89.3 (c)	86.4	103.4	80-120
Tin									
Titanium									
Vanadium	8.9	9.0 (a)	1.1	0-20	8.9	27.4 (a)	21.6	85.7	80-120
Zinc	0.0	0.0 (c)	NC	0-20	0.0	22.7 (c)	21.6	105.1	80-120

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Sample dilution required due to difficult matrix.
- (b) High RPD due to possible sample non-homogeneity.
- (c) Elevated reporting limit(s) due to matrix interference.
- (d) RPD acceptable due to low duplicate and sample concentrations.
- (e) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
- (f) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/10/19

Metal	FA68788-1 Original MSD	SpikeLot MPFLICP2 % Rec	MSD RPD	QC Limit	
Aluminum	943	1720 (a) 1230	63.4N(b) 11.0	20	
Antimony	0.90	18.0 (c) 22.7	75.4N(b) 5.7	20	
Arsenic	1.7	83.5 (a) 90.7	90.1	5.6	20
Barium	20.3	98.2 (a) 90.7	85.8	5.7	20
Beryllium	0.0	2.0 (a) 2.27	88.2	4.9	20
Cadmium	0.0	2.3 (c) 2.27	101.4	4.4	20
Calcium	288000	281000 1130	-617.1(d) 1.4	20	
Chromium	5.0	14.6 (c) 9.07	105.8	2.1	20
Cobalt	0.33	19.4 (a) 22.7	84.1	4.5	20
Copper	0.79	10.6 (a) 11.3	86.5	5.5	20
Iron	884	1700 (a) 1180	69.2N(b) 7.4	20	
Lead	0.97	23.3 (c) 22.7	98.4	0.9	20
Magnesium	5840	6470 (a) 1130	55.5 (d) 14.9	20	
Manganese	25.5	39.9 (a) 22.7	63.5N(b) 12.2	20	
Molybdenum					
Nickel	2.0	20.7 (a) 22.7	82.4	5.2	20
Potassium	219	1170 (a) 1130	83.8	6.6	20
Selenium	0.0	92.3 (c) 90.7	101.7	1.5	20
Silver	0.0	2.0 (a) 2.27	88.2	4.9	20
Sodium	1310	2370 (a) 1130	93.4	6.1	20
Strontium					
Thallium	0.0	89.8 (c) 90.7	99.0	0.6	20
Tin					
Titanium					
Vanadium	8.9	25.7 (a) 22.7	74.1N(b) 6.4	20	
Zinc	0.0	22.4 (c) 22.7	98.7	1.3	20

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Sample dilution required due to difficult matrix.
- (b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
- (c) Elevated reporting limit(s) due to matrix interference.
- (d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

11.22
11

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/10/19

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	1250	1350	92.6	80-120
Antimony	24.5	25	98.0	80-120
Arsenic	93.8	100	93.8	80-120
Barium	95.8	100	95.8	80-120
Beryllium	2.5	2.5	100.0	80-120
Cadmium	2.4	2.5	96.0	80-120
Calcium	1190	1250	95.2	80-120
Chromium	9.8	10	98.0	80-120
Cobalt	24.2	25	96.8	80-120
Copper	12.2	12.5	97.6	80-120
Iron	1240	1300	95.4	80-120
Lead	23.0	25	92.0	80-120
Magnesium	1190	1250	95.2	80-120
Manganese	25.3	25	101.2	80-120
Molybdenum				
Nickel	24.9	25	99.6	80-120
Potassium	1170	1250	93.6	80-120
Selenium	92.3	100	92.3	80-120
Silver	2.4	2.5	96.0	80-120
Sodium	1170	1250	93.6	80-120
Strontium				
Thallium	92.5	100	92.5	80-120
Tin				
Titanium				
Vanadium	23.6	25	94.4	80-120
Zinc	23.9	25	95.6	80-120

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

11.2.3
11

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/10/19

Metal	FA68788-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum	25300	19800	21.9*(a)	0-10
Antimony	24.1	0.00	100.0(b)	0-10
Arsenic	45.1	36.9	18.2 (b)	0-10
Barium	545	543	0.4	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	7720000	6240000	19.2*(a)	0-10
Chromium	133	121	9.2	0-10
Cobalt	8.80	11.2	27.3 (b)	0-10
Copper	21.3	0.00	100.0(b)	0-10
Iron	23700	23600	0.7	0-10
Lead	26.1	0.00	100.0(b)	0-10
Magnesium	157000	165000	5.4	0-10
Manganese	684	717	4.7	0-10
Molybdenum				
Nickel	53.9	53.5	0.7	0-10
Potassium	5880	5540	5.9	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	35100	36000	2.4	0-10
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	239	228	4.5	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: DA20878
 Account: ALMS - SGS Wheat Ridge, CO
 Project: WESTCOL: Evening Star & Compromise Mine RS

QC Batch ID: MP36242
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

10/10/19

Metal	Sample ml	Final ml	FA68788-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	25310	24803.8	21920	0.2	125	2500	-115.4*a	80-120
Antimony	9.8	10	24.1	23.618	126.4	0.2	5	100	102.8	80-120
Arsenic	9.8	10	45.1	44.198	155.5	0.2	5	100	111.3	80-120
Barium	9.8	10	545	534.1	782.6	0.2	12.5	250	99.4	80-120
Beryllium	9.8	10			50.8	0.2	2.5	50	101.6	80-120
Cadmium	9.8	10			45.8	0.2	2.5	50	91.6	80-120
Calcium	9.8	10	7723000	7568540	6939000	0.2	250	5000	-12590.8*a	80-120
Chromium	9.8	10	133.3	130.634	166.5	0.2	2.5	50	71.7*(a)	80-120
Cobalt	9.8	10	8.8	8.624	59	0.2	2.5	50	100.8	80-120
Copper	9.8	10	21.3	20.874	127	0.2	5	100	106.1	80-120
Iron	9.8	10	23740	23265.2	25090	0.2	150	3000	60.8*(a)	80-120
Lead	9.8	10	26.1	25.578	63.7	0.2	2.5	50	76.2*(a)	80-120
Magnesium	9.8	10	156800	153664	158700	0.2	250	5000	100.7	80-120
Manganese	9.8	10	684.4	670.712	722.8	0.2	2.5	50	104.2	80-120
Molybdenum										
Nickel	9.8	10	53.9	52.822	152	0.2	5	100	99.2	80-120
Potassium	9.8	10	5880	5762.4	15230	0.2	500	10000	94.7	80-120
Selenium	9.8	10			69.7	0.2	5	100	69.7*(a)	80-120
Silver	9.8	10			51.1	0.2	2.5	50	102.2	80-120
Sodium	9.8	10	35120	34417.6	45490	0.2	500	10000	110.7	80-120
Strontium										
Thallium	9.8	10			104.5	0.2	5	100	104.5	80-120
Tin										
Titanium										
Vanadium	9.8	10	239	234.22	267.8	0.2	2.5	50	67.2*(a)	80-120
Zinc	9.8	10			241.6	0.2	12.5	250	96.6	80-120

Associated samples MP36242: DA20878-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(**) Corr. sample result = Raw * (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Weston Solutions, Inc.

Evening Star & Compromise Mine RV

SGS Job Number: DA21353

Sampling Dates: 10/12/19 - 10/21/19

Report to:

Weston Solutions, Inc.
1435 Garrison Street Suite 100
Lakewood, CO 80215
michael.worden@westonsolutions.com; molly.patterson@westonsolutions.com
ATTN: Michael Worden

Total number of pages in report: **68**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Scott Heideman".

Scott Heideman
Laboratory Director

Client Service contact: Carissa Cumine 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), UT (NELAP CO00049)
LA (LA150028), TX (T104704511), WY (8TMS-L)

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Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: DA21353

Evening Star & Compromise Mine RV

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA21353-1	10/12/19	10:40 MW	10/23/19	SO	Soil	EM-01-SO-10122019
DA21353-2	10/12/19	10:55 MW	10/23/19	SO	Soil	EM-02-SO-10122019
DA21353-3	10/12/19	11:10 MW	10/23/19	SO	Soil	EM-03-SO-10122019
DA21353-4	10/12/19	11:35 MW	10/23/19	SO	Soil	EM-04-SO-10122019
DA21353-5	10/12/19	11:40 MW	10/23/19	SO	Soil	EM-05-SO-10122019
DA21353-6	10/12/19	12:10 MW	10/23/19	SO	Soil	EM-06-SO-10122019
DA21353-6M	10/12/19	12:10 MW	10/23/19	SO	Soil Matrix Spike	EM-06-SO-10122019
DA21353-6S	10/12/19	12:10 MW	10/23/19	SO	Soil Dup/MSD	EM-06-SO-10122019
DA21353-7	10/12/19	12:25 MW	10/23/19	SO	Soil	EM-07-SO-10122019
DA21353-8	10/12/19	12:40 MW	10/23/19	SO	Soil	EM-08-SO-10122019
DA21353-9	10/12/19	14:10 MW	10/23/19	SO	Soil	EM-09-SO-10122019
DA21353-10	10/12/19	14:20 MW	10/23/19	SO	Soil	EM-10-SO-10122019
DA21353-11	10/12/19	14:40 MW	10/23/19	SO	Soil	EM-11-SO-10122019

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Summary

(continued)

Weston Solutions, Inc.

Job No: DA21353

Evening Star & Compromise Mine RV

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
DA21353-12	10/12/19	12:10 MW	10/23/19	SO	Soil	EM-12-SO-10122019
DA21353-13	10/14/19	13:10 MW	10/23/19	SO	Soil	EM-13-SO-1014219
DA21353-14	10/14/19	13:10 MW	10/23/19	SO	Soil	EM-14-SO-10142019
DA21353-15	10/14/19	16:05 MW	10/23/19	SO	Soil	EM-15-SO-10142019
DA21353-15A	10/14/19	16:05 MW	10/23/19	SO	Soil	EM-15-SO-10142019
DA21353-16	10/16/19	10:30 MW	10/23/19	SO	Soil	EM-16-SO-10162019
DA21353-17	10/18/19	10:15 MW	10/23/19	SO	Soil	EM-17-SO-10182019
DA21353-18	10/19/19	09:50 MW	10/23/19	SO	Soil	EM-18-SO-10192019
DA21353-19	10/21/19	12:10 MW	10/23/19	SO	Soil	EM-15-SO-10212019
DA21353-19A	10/21/19	12:10 MW	10/23/19	SO	Soil	EM-15-SO-10212019
DA21353-20	10/21/19	12:35 MW	10/23/19	SO	Soil	EM-15-SS-12-10122019
DA21353-20A	10/21/19	12:35 MW	10/23/19	SO	Soil	EM-15-SS-12-10122019

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Weston Solutions, Inc.

Job No DA21353

Site: Evening Star & Compromise Mine RV

Report Date 11/1/2019 5:34:09 PM

On 10/23/2019, 20 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 5.9 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA21353 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010C

Matrix: LEACHATE

Batch ID: MP29315

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA21360-1MS, DA21360-1MSD, DA21360-1SDL were used as the QC samples for the metals analysis.
- The blank spike (BS) recovery(s) of Selenium are outside control limits. All sample results < RL
- The matrix spike (MS) and matrix spike duplicate (MSD) recovery(s) of Selenium are outside control limits. Spike recovery indicates possible matrix interference.
- The serial dilution RPD(s) for Chromium, Selenium, Silver are outside control limits for sample MP29315-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP29315-MB1 for Barium: All sample results < RL or > 10x MB concentration.

Matrix: SO

Batch ID: MP29281

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA21353-6MS, DA21353-6MSD, DA21353-6SDL were used as the QC samples for the metals analysis.
- The matrix spike duplicate (MSD) recovery(s) of Barium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Lead are outside control limits for sample MP29281-S2. High RPD due to possible sample nonhomogeneity.
- The serial dilution RPD(s) for Arsenic, Selenium, Cadmium, Chromium, Lead, Silver are outside control limits for sample MP29281-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP29281-SD1 for Cadmium, Chromium, Lead, Silver: Serial dilution indicates possible matrix interference.
- DA21353-1, -2, -3, -4, -5, -7, -8, -10, -11, -12, -13, -14, -15 for Chromium: Elevated detection limit due to dilution required for possible matrix interference.
- DA21353-18 for Arsenic, Cadmium, Chromium, Selenium, Silver: Elevated detection limit due to dilution required for possible matrix interference.

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE

Batch ID: MP29316

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA21360-1MS, DA21360-1MSD were used as the QC samples for the metals analysis.

Summary of Hits

Job Number: DA21353
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/12/19 thru 10/21/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA21353-1	EM-01-SO-10122019					
Arsenic		58.5	2.5		mg/kg	SW846 6010C
Barium		281	1.0		mg/kg	SW846 6010C
Cadmium		10.9	1.0		mg/kg	SW846 6010C
Lead		17300	250		mg/kg	SW846 6010C
Selenium		9.1	5.1		mg/kg	SW846 6010C
Silver		36.2	3.0		mg/kg	SW846 6010C

DA21353-2	EM-02-SO-10122019					
Arsenic		215	2.6		mg/kg	SW846 6010C
Barium		441	1.1		mg/kg	SW846 6010C
Cadmium		52.6	1.1		mg/kg	SW846 6010C
Lead		23700	260		mg/kg	SW846 6010C
Selenium		11.7	5.3		mg/kg	SW846 6010C
Silver		186	3.2		mg/kg	SW846 6010C

DA21353-3	EM-03-SO-10122019					
Arsenic		135	2.7		mg/kg	SW846 6010C
Barium		552	1.1		mg/kg	SW846 6010C
Cadmium		38.3	1.1		mg/kg	SW846 6010C
Lead		20200	270		mg/kg	SW846 6010C
Mercury		0.34	0.095		mg/kg	SW846 7471B
Selenium		5.9	5.4		mg/kg	SW846 6010C
Silver		166	3.2		mg/kg	SW846 6010C

DA21353-4	EM-04-SO-10122019					
Arsenic		125	2.6		mg/kg	SW846 6010C
Barium		740	1.0		mg/kg	SW846 6010C
Cadmium		14.6	1.0		mg/kg	SW846 6010C
Lead		12300	260		mg/kg	SW846 6010C
Mercury		0.50	0.098		mg/kg	SW846 7471B
Selenium		6.7	5.2		mg/kg	SW846 6010C
Silver		85.2	3.1		mg/kg	SW846 6010C

DA21353-5	EM-05-SO-10122019					
Arsenic		58.9	2.9		mg/kg	SW846 6010C
Barium		160	1.2		mg/kg	SW846 6010C
Cadmium		65.6	1.2		mg/kg	SW846 6010C
Lead		60700	290		mg/kg	SW846 6010C
Mercury		0.28	0.096		mg/kg	SW846 7471B

Summary of Hits

Job Number: DA21353
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/12/19 thru 10/21/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Selenium		5.8	5.8		mg/kg	SW846 6010C
Silver		50.8	3.5		mg/kg	SW846 6010C

DA21353-6 EM-06-SO-10122019

Arsenic		10.3	2.5		mg/kg	SW846 6010C
Barium		162	1.0		mg/kg	SW846 6010C
Cadmium		1.5	1.0		mg/kg	SW846 6010C
Chromium		37.7	1.0		mg/kg	SW846 6010C
Lead		917	5.1		mg/kg	SW846 6010C
Mercury		0.32	0.087		mg/kg	SW846 7471B
Silver		5.3	3.0		mg/kg	SW846 6010C

DA21353-7 EM-07-SO-10122019

Arsenic		32.1	2.8		mg/kg	SW846 6010C
Barium		672	1.1		mg/kg	SW846 6010C
Cadmium		32.6	1.1		mg/kg	SW846 6010C
Lead		2690	5.7		mg/kg	SW846 6010C
Mercury		0.36	0.088		mg/kg	SW846 7471B
Silver		40.6	3.4		mg/kg	SW846 6010C

DA21353-8 EM-08-SO-10122019

Arsenic		183	2.8		mg/kg	SW846 6010C
Barium		1270	1.1		mg/kg	SW846 6010C
Cadmium		30.8	1.1		mg/kg	SW846 6010C
Lead		8230	5.5		mg/kg	SW846 6010C
Mercury		0.49	0.092		mg/kg	SW846 7471B
Selenium		7.5	5.5		mg/kg	SW846 6010C
Silver		185	3.3		mg/kg	SW846 6010C

DA21353-9 EM-09-SO-10122019

Arsenic		243	27		mg/kg	SW846 6010C
Barium		237	1.1		mg/kg	SW846 6010C
Cadmium		40.9	11		mg/kg	SW846 6010C
Lead		11100	55		mg/kg	SW846 6010C
Mercury		0.18	0.091		mg/kg	SW846 7471B
Silver		40.1	33		mg/kg	SW846 6010C

DA21353-10 EM-10-SO-10122019

Arsenic		41.5	2.9		mg/kg	SW846 6010C
Barium		248	1.2		mg/kg	SW846 6010C

Summary of Hits

Job Number: DA21353
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/12/19 thru 10/21/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Cadmium		5.8	1.2		mg/kg	SW846 6010C
Lead		19500	290		mg/kg	SW846 6010C
Mercury		0.14	0.098		mg/kg	SW846 7471B
Selenium		9.6	5.9		mg/kg	SW846 6010C
Silver		32.3	3.5		mg/kg	SW846 6010C

DA21353-11 EM-11-SO-10122019

Arsenic		89.6	2.5		mg/kg	SW846 6010C
Barium		466	0.98		mg/kg	SW846 6010C
Cadmium		17.2	0.98		mg/kg	SW846 6010C
Lead		3400	4.9		mg/kg	SW846 6010C
Mercury		0.38	0.097		mg/kg	SW846 7471B
Selenium		12.9	4.9		mg/kg	SW846 6010C
Silver		46.7	2.9		mg/kg	SW846 6010C

DA21353-12 EM-12-SO-10122019

Arsenic		13.3	2.8		mg/kg	SW846 6010C
Barium		1280	1.1		mg/kg	SW846 6010C
Cadmium		2.9	1.1		mg/kg	SW846 6010C
Lead		967	5.6		mg/kg	SW846 6010C
Silver		4.8	3.4		mg/kg	SW846 6010C

DA21353-13 EM-13-SO-1014219

Arsenic		9.2	2.7		mg/kg	SW846 6010C
Barium		377	1.1		mg/kg	SW846 6010C
Cadmium		6.4	1.1		mg/kg	SW846 6010C
Lead		1920	5.3		mg/kg	SW846 6010C
Selenium		10.9	5.3		mg/kg	SW846 6010C
Silver		12.3	3.2		mg/kg	SW846 6010C

DA21353-14 EM-14-SO-10142019

Arsenic		9.4	3.0		mg/kg	SW846 6010C
Barium		286	1.2		mg/kg	SW846 6010C
Cadmium		3.4	1.2		mg/kg	SW846 6010C
Lead		851	6.0		mg/kg	SW846 6010C
Selenium		6.0	6.0		mg/kg	SW846 6010C
Silver		12.0	3.6		mg/kg	SW846 6010C

DA21353-15 EM-15-SO-10142019

Arsenic		114	2.6		mg/kg	SW846 6010C
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Summary of Hits

Job Number: DA21353
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/12/19 thru 10/21/19



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
		Barium	485	1.1	mg/kg	SW846 6010C
		Cadmium	27.2	1.1	mg/kg	SW846 6010C
		Lead	15100	260	mg/kg	SW846 6010C
		Mercury	0.37	0.095	mg/kg	SW846 7471B
		Selenium	6.0	5.3	mg/kg	SW846 6010C
		Silver	102	3.2	mg/kg	SW846 6010C
DA21353-15A EM-15-SO-10142019						
		Barium	0.38	0.010	mg/l	SW846 6010C
		Cadmium	0.14	0.010	mg/l	SW846 6010C
		Lead	62.8	0.050	mg/l	SW846 6010C
DA21353-16 EM-16-SO-10162019						
		Arsenic	12.9	2.6	mg/kg	SW846 6010C
		Barium	169	1.0	mg/kg	SW846 6010C
		Chromium	8.7	1.0	mg/kg	SW846 6010C
		Lead	40.6	5.2	mg/kg	SW846 6010C
		Mercury	0.087	0.087	mg/kg	SW846 7471B
DA21353-17 EM-17-SO-10182019						
		Arsenic	14.2	2.5	mg/kg	SW846 6010C
		Barium	265	0.99	mg/kg	SW846 6010C
		Cadmium	1.8	0.99	mg/kg	SW846 6010C
		Chromium	16.3	0.99	mg/kg	SW846 6010C
		Lead	484	4.9	mg/kg	SW846 6010C
		Silver	3.6	3.0	mg/kg	SW846 6010C
DA21353-18 EM-18-SO-10192019						
		Barium	948	10	mg/kg	SW846 6010C
		Lead	404	51	mg/kg	SW846 6010C
		Mercury	0.12	0.082	mg/kg	SW846 7471B
DA21353-19 EM-15-SO-10212019						
		Barium	839	57	mg/kg	SW846 6010C
		Lead	6550	290	mg/kg	SW846 6010C
		Mercury	0.28	0.088	mg/kg	SW846 7471B
DA21353-19A EM-15-SO-10212019						
		Barium	0.31	0.010	mg/l	SW846 6010C

Summary of Hits

Job Number: DA21353
Account: Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV
Collected: 10/12/19 thru 10/21/19

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA21353-20 EM-15-SS-12-10122019

Barium	783	53		mg/kg	SW846 6010C
Lead	11900	270		mg/kg	SW846 6010C
Mercury	0.33	0.091		mg/kg	SW846 7471B

DA21353-20A EM-15-SS-12-10122019

Barium	0.30	0.010		mg/l	SW846 6010C
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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: EM-01-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-1		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 87.6
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	58.5	2.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	281	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	10.9	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 51	51	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	17300	250	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	< 0.83	0.83	mg/kg	10	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	9.1	5.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	36.2	3.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.1
4

Report of Analysis

Client Sample ID: EM-02-SO-10122019 Lab Sample ID: DA21353-2 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/12/19 Date Received: 10/23/19 Percent Solids: 86.3
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	215	2.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	441	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	52.6	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 53	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	23700	260	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	< 0.93	0.93	mg/kg	10	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	11.7	5.3	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	186	3.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.2
4

Report of Analysis

Client Sample ID: EM-03-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-3		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 83.4
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	135	2.7	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	552	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	38.3	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 54	54	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	20200	270	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.34	0.095	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	5.9	5.4	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	166	3.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: EM-04-SO-10122019	Date Sampled: 10/12/19
Lab Sample ID: DA21353-4	Date Received: 10/23/19
Matrix: SO - Soil	Percent Solids: 83.3
Project: Evening Star & Compromise Mine RV	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	125	2.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	740	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	14.6	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 52	52	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	12300	260	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.50	0.098	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	6.7	5.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	85.2	3.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.4
4

Report of Analysis

Client Sample ID: EM-05-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-5		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 83.0
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	58.9	2.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	160	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	65.6	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 58	58	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	60700	290	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.28	0.096	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	5.8	5.8	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	50.8	3.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.5
4

Report of Analysis

Client Sample ID: EM-06-SO-10122019 Lab Sample ID: DA21353-6 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/12/19 Date Received: 10/23/19 Percent Solids: 89.5
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.3	2.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	162	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium	1.5	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium	37.7	1.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	917	5.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	0.32	0.087	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium	< 5.1	5.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³
Silver	5.3	3.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

RL = Reporting Limit

4.6
4

Report of Analysis

Client Sample ID: EM-07-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-7		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 81.4
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	32.1	2.8	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	672	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	32.6	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 57	57	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	2690	5.7	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.36	0.088	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	< 5.7	5.7	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	40.6	3.4	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.7
4

Report of Analysis

Client Sample ID: EM-08-SO-10122019 Lab Sample ID: DA21353-8 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/12/19 Date Received: 10/23/19 Percent Solids: 77.7
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	183	2.8	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	1270	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	30.8	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 55	55	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	8230	5.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.49	0.092	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	7.5	5.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	185	3.3	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.8
4

Report of Analysis

Client Sample ID: EM-09-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-9		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 90.2
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	243	27	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Barium	237	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	40.9	11	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Chromium	< 11	11	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	11100	55	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.18	0.091	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	< 55	55	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Silver	40.1	33	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

RL = Reporting Limit

4.9
4

Report of Analysis

Client Sample ID: EM-10-SO-10122019	Date Sampled: 10/12/19
Lab Sample ID: DA21353-10	Date Received: 10/23/19
Matrix: SO - Soil	Percent Solids: 85.3
Project: Evening Star & Compromise Mine RV	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	41.5	2.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	248	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	5.8	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 59	59	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	19500	290	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.14	0.098	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	9.6	5.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	32.3	3.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: EM-11-SO-10122019		Date Sampled: 10/12/19
Lab Sample ID: DA21353-11		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 86.3
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	89.6	2.5	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	466	0.98	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	17.2	0.98	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 49	49	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	3400	4.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.38	0.097	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	12.9	4.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	46.7	2.9	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.11
4

Report of Analysis

Client Sample ID: EM-12-SO-10122019 Lab Sample ID: DA21353-12 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/12/19 Date Received: 10/23/19 Percent Solids: 88.1
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	13.3	2.8	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	1280	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	2.9	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 56	56	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	967	5.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	< 0.093	0.093	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	< 5.6	5.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	4.8	3.4	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.12
4

Report of Analysis

Client Sample ID: EM-13-SO-1014219		Date Sampled: 10/14/19
Lab Sample ID: DA21353-13		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 81.2
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.2	2.7	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	377	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	6.4	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 53	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	1920	5.3	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	< 0.10	0.10	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	10.9	5.3	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	12.3	3.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.13
4

Report of Analysis

Client Sample ID: EM-14-SO-10142019	Date Sampled: 10/14/19
Lab Sample ID: DA21353-14	Date Received: 10/23/19
Matrix: SO - Soil	Percent Solids: 80.4
Project: Evening Star & Compromise Mine RV	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.4	3.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	286	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	3.4	1.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 60	60	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	851	6.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Mercury	< 0.094	0.094	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	6.0	6.0	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	12.0	3.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID: EM-15-SO-10142019 Lab Sample ID: DA21353-15 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/14/19 Date Received: 10/23/19 Percent Solids: 83.8
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	114	2.6	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Barium	485	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Cadmium	27.2	1.1	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Chromium ^a	< 53	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Lead	15100	260	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ³	SW846 3050B ⁴
Mercury	0.37	0.095	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁵
Selenium	6.0	5.3	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴
Silver	102	3.2	mg/kg	1	10/24/19	10/25/19 JM	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11920
- (3) Instrument QC Batch: MA11924
- (4) Prep QC Batch: MP29281
- (5) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.15
4

Report of Analysis

Client Sample ID: EM-15-SO-10142019 Lab Sample ID: DA21353-15A Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/14/19 Date Received: 10/23/19 Percent Solids: 83.8
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4.16
4

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Barium	0.38	D005	100	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Cadmium	0.14	D006	1.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Lead	62.8	D008	5.0	0.050	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	10/31/19	10/31/19 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11930
- (2) Instrument QC Batch: MA11932
- (3) Instrument QC Batch: MA11934
- (4) Prep QC Batch: MP29315
- (5) Prep QC Batch: MP29316

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: EM-16-SO-10162019 Lab Sample ID: DA21353-16 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/16/19 Date Received: 10/23/19 Percent Solids: 92.4
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	12.9	2.6	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	169	1.0	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium	< 1.0	1.0	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium	8.7	1.0	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	40.6	5.2	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	0.087	0.087	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium	< 5.2	5.2	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Silver	< 3.1	3.1	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11924
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

RL = Reporting Limit

4.17
4

Report of Analysis

Client Sample ID: EM-17-SO-10182019 Lab Sample ID: DA21353-17 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/18/19 Date Received: 10/23/19 Percent Solids: 86.6
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	14.2	2.5	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	265	0.99	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium	1.8	0.99	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium	16.3	0.99	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	484	4.9	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	< 0.089	0.089	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium	< 4.9	4.9	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Silver	3.6	3.0	mg/kg	1	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11924
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

RL = Reporting Limit

4.18
4

Report of Analysis

Client Sample ID: EM-18-SO-10192019		Date Sampled: 10/19/19
Lab Sample ID: DA21353-18		Date Received: 10/23/19
Matrix: SO - Soil		Percent Solids: 93.9
Project: Evening Star & Compromise Mine RV		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic ^a	< 25	25	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	948	10	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium ^a	< 10	10	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium ^a	< 10	10	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	404	51	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	0.12	0.082	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium ^a	< 51	51	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Silver ^a	< 30	30	mg/kg	10	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11924
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

(a) Elevated detection limit due to dilution required for possible matrix interference.

RL = Reporting Limit

4.19
4

Report of Analysis

Client Sample ID: EM-15-SO-10212019 Lab Sample ID: DA21353-19 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/21/19 Date Received: 10/23/19 Percent Solids: 84.9
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 140	140	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	839	57	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium	< 57	57	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium	< 57	57	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	6550	290	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	0.28	0.088	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium	< 290	290	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Silver	< 170	170	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11924
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

RL = Reporting Limit

4.20
4

Report of Analysis

Client Sample ID: EM-15-SO-10212019 Lab Sample ID: DA21353-19A Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/21/19 Date Received: 10/23/19 Percent Solids: 84.9
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Barium	0.31	D005	100	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Cadmium	< 0.010	D006	1.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Lead	< 0.050	D008	5.0	0.050	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	10/31/19	10/31/19 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11930
- (2) Instrument QC Batch: MA11932
- (3) Instrument QC Batch: MA11934
- (4) Prep QC Batch: MP29315
- (5) Prep QC Batch: MP29316

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.21
4

Report of Analysis

Client Sample ID: EM-15-SS-12-10122019 Lab Sample ID: DA21353-20 Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/21/19 Date Received: 10/23/19 Percent Solids: 84.3
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Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 130	130	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Barium	783	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Cadmium	< 53	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Chromium	< 53	53	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Lead	11900	270	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Mercury	0.33	0.091	mg/kg	1	10/24/19	10/24/19 JM	SW846 7471B ¹	SW846 7471B ⁴
Selenium	< 270	270	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³
Silver	< 160	160	mg/kg	50	10/24/19	10/29/19 JM	SW846 6010C ²	SW846 3050B ³

- (1) Instrument QC Batch: MA11913
- (2) Instrument QC Batch: MA11924
- (3) Prep QC Batch: MP29281
- (4) Prep QC Batch: MP29294

RL = Reporting Limit

4.22
4

Report of Analysis

Client Sample ID: EM-15-SS-12-10122019 Lab Sample ID: DA21353-20A Matrix: SO - Soil Project: Evening Star & Compromise Mine RV	Date Sampled: 10/21/19 Date Received: 10/23/19 Percent Solids: 84.3
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Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 0.025	D004	5.0	0.025	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Barium	0.30	D005	100	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Cadmium	< 0.010	D006	1.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Lead	< 0.050	D008	5.0	0.050	mg/l	1	10/30/19	10/31/19 JM	SW846 6010C ³	SW846 3010A ⁴
Mercury	< 0.00010	D009	0.20	0.00010	mg/l	1	10/31/19	10/31/19 JM	SW846 7470A ²	SW846 7470A ⁵
Selenium	< 0.050	D010	1.0	0.050	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴
Silver	< 0.030	D011	5.0	0.030	mg/l	1	10/30/19	10/30/19 JM	SW846 6010C ¹	SW846 3010A ⁴

- (1) Instrument QC Batch: MA11930
- (2) Instrument QC Batch: MA11932
- (3) Instrument QC Batch: MA11934
- (4) Prep QC Batch: MP29315
- (5) Prep QC Batch: MP29316

RL = Reporting Limit
 MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

4.23
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS Accutest Sample Receipt Summary

Job Number: DA21353

Client: WESTON

Project: EVENING STAR AND COMPROMISE MINE RV

Date / Time Received: 10/23/2019 9:45:00 AM

Delivery Method:

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (5.9/5.9):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun; | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

5.1
5

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 10/24/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	1.1	1.7		
Antimony	3.0	.21	.82		
Arsenic	2.5	.38	1	0.29	<2.5
Barium	1.0	.02	.16	0.19	<1.0
Beryllium	1.0	.09	.16		
Boron	5.0	.08	.29		
Cadmium	1.0	.02	.1	-0.020	<1.0
Calcium	40	.24	9.6		
Chromium	1.0	.03	.19	0.060	<1.0
Cobalt	0.50	.05	.12		
Copper	1.0	.08	.48		
Iron	7.0	.15	.69		
Lead	5.0	.21	.6	1.4	<5.0
Lithium	0.50	.04	.07		
Magnesium	20	.68	3.9		
Manganese	0.50	.05	.07		
Molybdenum	1.0	.04	.36		
Nickel	3.0	.05	.24		
Phosphorus	10	1.5	4.3		
Potassium	200	9.9	6		
Selenium	5.0	.71	1	0.22	<5.0
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05	0.0	<3.0
Sodium	40	.73	1.5		
Strontium	5.0	.001	.03		
Thallium	1.0	.18	.86		
Tin	5.0	1.2	1.2		
Titanium	1.0	.01	.27		
Uranium	5.0	.29	.44		
Vanadium	1.0	.04	.07		
Zinc	3.0	.04	.35		

Associated samples MP29281: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 10/24/19

Metal	RL	IDL	MDL	MB raw	final
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	10.3	107	101	96.1	75-125
Barium	162	411	201	123.7	75-125
Beryllium					
Boron					
Cadmium	1.5	45.7	50.3	87.8	75-125
Calcium					
Chromium	37.7	88.6	50.3	101.1	75-125
Cobalt					
Copper					
Iron					
Lead	917	935	101	17.9 (a)	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	2.0	94.3	101	91.7	75-125
Silicon					
Silver	5.3	25.3	20.1	99.3	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP29281: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MS	SpikeLot ICPAL2	% Rec	QC Limits
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Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

6.1.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MSD		SpikeLot ICPAL2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	10.3	109	99.8	98.9	1.9	20
Barium	162	419	200	128.8N(a)	1.9	20
Beryllium						
Boron						
Cadmium	1.5	45.3	49.9	87.8	0.9	20
Calcium						
Chromium	37.7	98.6	49.9	122.1	10.7	20
Cobalt						
Copper						
Iron						
Lead	917	1190	99.8	273.7(b)	24.0 (c)	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	2.0	97.0	99.8	95.2	2.8	20
Silicon						
Silver	5.3	26.3	20	105.3	3.9	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP29281: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
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Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (c) High RPD due to possible sample nonhomogeneity.

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 10/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	107	100	107.0	80-120
Barium	197	200	98.5	80-120
Beryllium				
Boron				
Cadmium	50.3	50	100.6	80-120
Calcium				
Chromium	51.4	50	102.8	80-120
Cobalt				
Copper				
Iron				
Lead	96.9	100	96.9	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	110	100	110.0	80-120
Silicon				
Silver	20.2	20	101.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP29281: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 10/24/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.1.3

6

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/24/19

Metal	DA21353-6 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	101	126	24.1 (a)	0-10
Barium	1590	1740	9.1	0-10
Beryllium				
Boron				
Cadmium	15.0	13.0	13.3*(b)	0-10
Calcium				
Chromium	371	409	10.2*(b)	0-10
Cobalt				
Copper				
Iron				
Lead	9030	10500	16.3*(b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	19.5	0.00	100.0(a)	0-10
Silicon				
Silver	52.4	58.0	10.7*(b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP29281: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

SERIAL DILUTION RESULTS SUMMARY

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29281
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/24/19

Metal	DA21353-6	QC
	Original SDL 1:5 %DIF	Limits

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

6.1.4
6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29294
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 10/24/19

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.083	.00088	.007	-0.0030	<0.083

Associated samples MP29294: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29294
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MS	Spikelot HGWSR1	% Rec	QC Limits	
Mercury	0.32	0.63	0.366	84.6	75-125

Associated samples MP29294: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.2.2
 6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29294
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 10/24/19

Metal	DA21353-6 Original MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.32	0.56	0.366	65.5N(a) 11.8	20

Associated samples MP29294: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

6.2.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29294
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 10/24/19

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.35	0.333	105.0	80-120

Associated samples MP29294: DA21353-1, DA21353-2, DA21353-3, DA21353-4, DA21353-5, DA21353-6, DA21353-7, DA21353-8, DA21353-9, DA21353-10, DA21353-11, DA21353-12, DA21353-13, DA21353-14, DA21353-15, DA21353-16, DA21353-17, DA21353-18, DA21353-19, DA21353-20

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

6.2.3
 6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 10/30/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.011	.015		
Antimony	0.030	.0021	.0068		
Arsenic	0.025	.0038	.0046	-0.00010	<0.025
Barium	0.010	.0002	.0013	0.019	* (a)
Beryllium	0.010	.0009	.0013		
Boron	0.050	.0008	.0063		
Cadmium	0.010	.0002	.0013	0.00040	<0.010
Calcium	0.40	.0024	.05		
Chromium	0.010	.0003	.0013	0.0010	<0.010
Cobalt	0.0050	.0005	.00063		
Copper	0.010	.0008	.0013		
Iron	0.070	.0015	.012		
Lead	0.050	.0021	.0063	-0.0028	<0.050
Lithium	0.0050	.0004	.0013		
Magnesium	0.20	.0068	.025		
Manganese	0.0050	.0005	.00063		
Molybdenum	0.010	.0004	.0028		
Nickel	0.030	.0005	.0038		
Phosphorus	0.10	.015	.016		
Potassium	1.0	.099	.13		
Selenium	0.050	.0071	.022	0.017	<0.050
Silicon	0.050	.0047	.015		
Silver	0.030	.0003	.0038	0.00040	<0.030
Sodium	0.40	.0073	.05		
Strontium	0.0050	.00001	.00063		
Thallium	0.010	.0018	.0043		
Tin	0.060	.012	.051		
Titanium	0.010	.0001	.0013		
Uranium	0.050	.0029	.0085		
Vanadium	0.010	.0004	.0013		
Zinc	0.030	.0004	.0038		

Associated samples MP29315: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 10/30/19

Metal	RL	IDL	MDL	MB raw	final
-------	----	-----	-----	-----------	-------

(anr) Analyte not requested

(a) All sample results < RL or > 10x MB concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 10/30/19

Metal	DA21360-1 Original MS		SpikeLot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	0.0	1.2	1.0	120.0	75-125
Barium	2.4	4.6	2.0	110.0	75-125
Beryllium					
Boron					
Cadmium	0.0076	0.55	0.50	108.5	75-125
Calcium					
Chromium	0.0026	0.49	0.50	97.5	75-125
Cobalt					
Copper					
Iron					
Lead	0.30	1.2	1.0	92.0	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	0.039	1.3	1.0	127.2N(a)	75-125
Silicon					
Silver	0.00060	0.22	0.20	109.7	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP29315: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 10/30/19

Metal	DA21360-1 Original MS	SpikeLot ICPAL2	% Rec	QC Limits
-------	--------------------------	--------------------	-------	--------------

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference.

6.3.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 10/30/19

Metal	DA21360-1 Original MSD		SpikeLot ICPAL2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	1.2	1.0	120.0	0.0	20
Barium	2.4	4.7	2.0	115.0	2.2	20
Beryllium						
Boron						
Cadmium	0.0076	0.54	0.50	106.5	1.8	20
Calcium						
Chromium	0.0026	0.48	0.50	95.5	2.1	20
Cobalt						
Copper						
Iron						
Lead	0.30	1.2	1.0	92.0	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	0.039	1.3	1.0	127.2N(a	0.0	20
Silicon						
Silver	0.00060	0.22	0.20	109.7	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP29315: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 10/30/19

Metal	DA21360-1 Original MSD	SpikeLot ICPALL2 % Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: mg/l

Prep Date: 10/30/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	1.2	1.0	120.0	80-120
Barium	2.2	2.0	110.0	80-120
Beryllium				
Boron				
Cadmium	0.55	0.50	110.0	80-120
Calcium				
Chromium	0.50	0.50	100.0	80-120
Cobalt				
Copper				
Iron				
Lead	0.92	1.0	92.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	1.3	1.0	130.0*(a)	80-120
Silicon				
Silver	0.23	0.20	115.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP29315: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

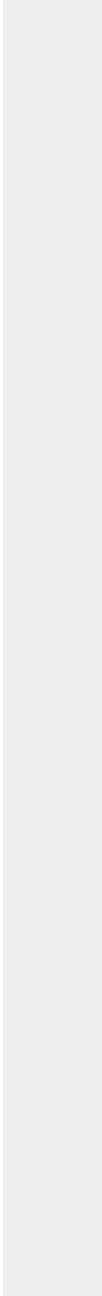
QC Batch ID: MP29315
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 10/30/19

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested
(a) All sample results < RL



SERIAL DILUTION RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
 Matrix Type: LEACHATE

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/30/19

Metal	DA21360-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	2200	2420	0.7	0-10
Beryllium				
Boron				
Cadmium	7.60	8.00	5.3	0-10
Calcium				
Chromium	2.60	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	297	303	6.9	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	27.7	0.00	100.0(a)	0-10
Silicon				
Silver	0.600	0.00	100.0(a)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP29315: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

6.3.4
 6



SERIAL DILUTION RESULTS SUMMARY

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29315
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/30/19

Metal	DA21360-1	QC
	Original SDL 1:5 %DIF	Limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.3.4

6

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA21353
Account: WESTCOL - Weston Solutions, Inc.
Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29316
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 10/31/19

Metal	RL	IDL	MDL	MB raw	final
-------	----	-----	-----	-----------	-------

Mercury 0.00010 .000011 .00002 -0.000057<0.00010

Associated samples MP29316: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29316
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 10/31/19

Metal	DA21360-1 Original MS	SpikeLot HGWSR1	% Rec	QC Limits
-------	--------------------------	--------------------	-------	--------------

Mercury 0.000078 0.0032 0.0031 99.9 75-125

Associated samples MP29316: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29316
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 10/31/19

Metal	DA21360-1 Original MSD	SpikeLot HGWSR1	% Rec	MSD RPD	QC Limit
-------	---------------------------	--------------------	-------	------------	-------------

Mercury 0.000078 0.0031 0.0031 96.7 3.2 20

Associated samples MP29316: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

6.4.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA21353
 Account: WESTCOL - Weston Solutions, Inc.
 Project: Evening Star & Compromise Mine RV

QC Batch ID: MP29316
 Matrix Type: LEACHATE

Methods: SW846 7470A
 Units: mg/l

Prep Date: 10/31/19

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
-------	---------------	--------------------	-------	--------------

Mercury 0.0035 0.0031 112.0 80-120

Associated samples MP29316: DA21353-15A, DA21353-19A, DA21353-20A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

Attachment F

Seed Mix Information

Seed Mix Helena-Lewis & Clark National Forest

Common Name	Species	lbs/ac
Mountain brome	<i>Bromus marginatus</i>	11.50
Sterile Wheat	<i>Triticale x Secale</i>	5.75
Tufted hairgrass	<i>Deschampsia caespitosa</i>	0.15
Rough bentgrass	<i>Agrostis scabra</i>	0.02
Sandberg's bluegrass	<i>Poa secunda</i>	0.50
Bluebunch wheatgrass	<i>Pseudoregneria spicata</i>	2.75
Idaho Fescue	<i>Festuca idahoensis</i>	1.00
Blue wildrye	<i>Elymus glaucus</i>	1.75

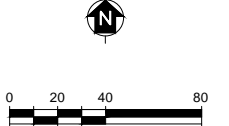
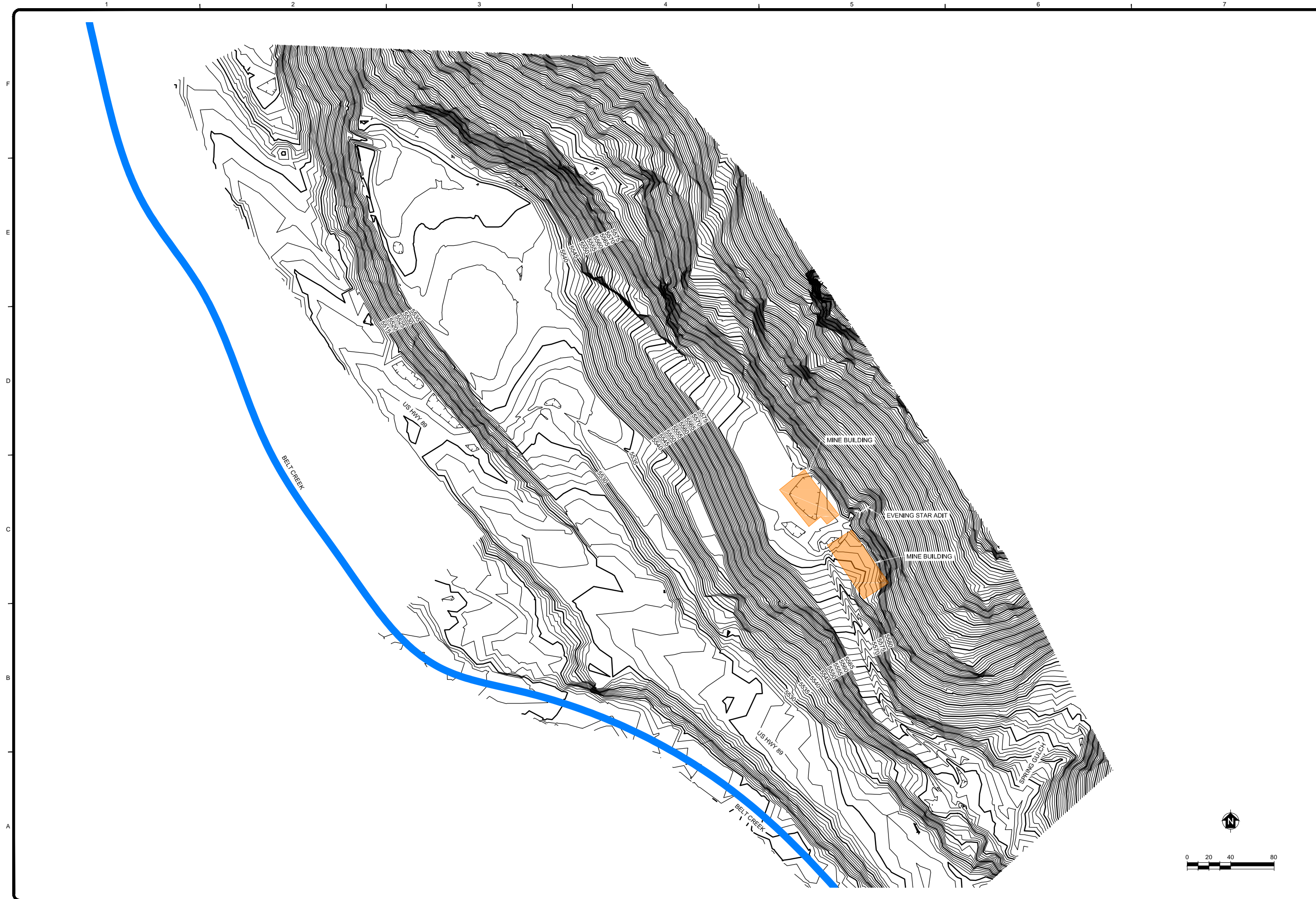
Percent total:

23.42

Attachment G

Post Removal Site Topographic Survey

12/18/2019 4:41 PM - S:\CAD\STATE\CARPENTER SNOW CREEK\TO-70 EVENING STAR AND COMPROMISE\FINAL SURVEY\CYC-101 EVENING STAR OVERALL EXISTING SITE MAP.DWG



TETRA TECH
www.tetra.tech.com
825 W. Custer Ave.
Helena, Montana 59602
PHONE: 406-442-5688 FAX: 406-442-7182

DEQ
Montana Department of Environmental Quality
REMEDATION DIVISION
1225 CEDAR STREET
HELENA, MONTANA 59601
(406) 444-6444

MARK	DATE	DESCRIPTION	BY

CARPENTER-SNOW CREEK MINING DISTRICT NPL SITE
2018 REMOVAL DESIGN
EVENING STAR MINE

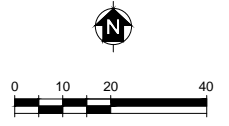
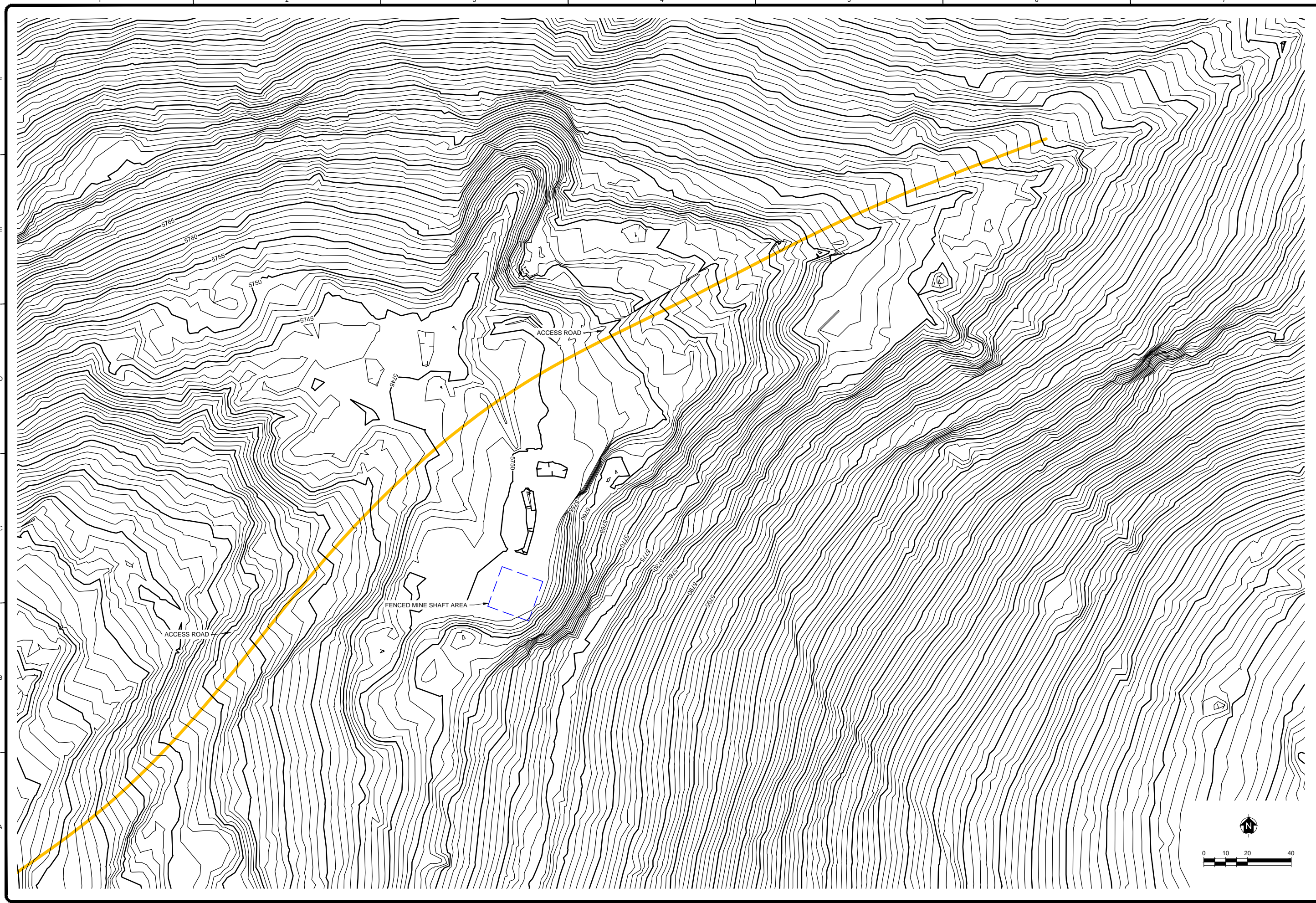
Survey - Final Grade

Project No.: 103S320370
Designed By: PEM
Drawn By: PEM
Checked By: ###

C-XX

Copyright Tetra Tech
Bar Measures 1 inch

12/19/2019 4:42 PM - S:\CAD\STATE\CARPENTER SNOW CREEK\TO-70 EVENING STAR AND COMPROMISE\FINAL SURVEY\CYC-101_COMPROMISE TOPOGRAPHY.DWG



MARK	DATE	DESCRIPTION	BY

CARPENTERSNOW CREEK MINING DISTRICT NPL SITE
2018 REMOVAL DESIGN
COMPROMISE MINE

Survey - Final Grade

Project No.: 103S320370
Designed By: PEM
Drawn By: PEM
Checked By: ###

C-XX

DEQ
Montana Department of Environmental Quality

REMEDATION DIVISION
1225 CEDAR STREET
HELENA, MONTANA, 59601
(406) 444-6444

TETRA TECH

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Bar Measures 1 inch

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