Nowell, Keith, Env. Health

From:	Nuchims, Eric <nuchims.eric@epa.gov></nuchims.eric@epa.gov>
Sent:	Tuesday, September 04, 2018 12:04 PM
То:	Roe, Dilan, Env. Health; Mike Bowes (mike.bowes@tripointhomes.com)
Cc:	Peter Morris; Nowell, Keith, Env. Health
Subject:	RE: 1708 Wood Street Development
Attachments:	Final Bercovich Removal Action Report.pdf

Dilan and Mike

Here is the final report from the Bercovich Lead Smelter Removal Action. Within it is reference to the staging area used at 1708 Wood Street. From the document, below is an excerpt from the report:

The Staging Area was located at 1708 Wood Street in Oakland, California, which was a nonoperational trucking yard directly adjacent to the Site, across Campbell Street (Figure 5). The Staging Area was comprised of an asphalt parking lot surrounded by two rows of security fencing. Temporary fence panels were installed to delineate the Staging Area, and separate it from the remainder of the property. One portable office trailer was present with electrical service being supplied via diesel-powered generator. The Staging Area was used for parking vehicles and heavy equipment, as well as stockpiling and loading of clean backfill materials. Empty roll-off bins were delivered to the Staging Area, then transported to a residential property to be filled. Filled roll-off bins were stored at the Staging Area, but only after being properly tarped and removing any excess Bercovich Smelter Removal Action 10 TDD No. 0002/1302-T2-R9-17-08-0002

Removal Action Report 0163-08-ABOR

soil from the exterior prior to being transported.

To determine if staging activities impacted the Staging Area, surface soil samples were collected on April 18, 2018, before activities commenced, and again after demobilization, on May 14, 2018. The entire surface of the Staging Area was covered in asphalt surrounded by a concrete berm. Three samples were collected in the areas where a break in the berm was present. One sample was collected outside of the Staging Area, located next to the fire hydrant which was constantly used as a water source.

The samples were analyzed for volatiles using EPA Method 8260B, semivolatiles using EPA Method 9270C, polychlorinated biphenyls using EPA Method 8082A, total metals using EPA Method 6010B, and mercury using EPA Method 7471A. All samples were analyzed by the EPA Region 9 Laboratory in Richmond, California.

Comparison of the baseline and verification sample results indicate no contaminants were introduced to the Staging Area as a result of removal activities. Sampling results are summarized in Table 4. The data validation reports and laboratory data packages are provided in Appendix D.

Sincerely

Eric Nuchims Federal On-Scene Coordinator U.S. Environmental Protection Agency - Region IX Superfund - Emergency Response Section 75 Hawthorne Street Mail Code: SFD-9-2 San Francisco, CA 94105 Desk Phone: 415 972-3252



From: Roe, Dilan, Env. Health [mailto:Dilan.Roe@acgov.org]
Sent: Friday, August 31, 2018 11:52 AM
To: Nuchims, Eric <nuchims.eric@epa.gov>; Mike Bowes (mike.bowes@tripointhomes.com)
<mike.bowes@tripointhomes.com>
Cc: Peter Morris <peterm@westenvironmental.com>; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>
Subject: RE: 1708 Wood Street Development

Good Morning Eric and Mike:

Please provide a status on submittal of a copy of the Bercovich Lead Smelter Removal report. Prior to authorizing site grading activities to occur at the site, Alameda County Department of Environmental Health requires documentation that the 1708 Wood Street site is no longer being used as a staging area and that the pre and post sampling that was conducted at the site in accordance with the attached SAP and sample location figure.

Thanks,

Dilan Roe, PE, C73703

Chief – Land Water Division Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Alameda, CA 510.567.6767; Ext. 36767 QIC: 30440 <u>dilan.roe@acgov.org</u>

From: Roe, Dilan, Env. Health
Sent: Thursday, July 26, 2018 1:00 PM
To: 'Nuchims, Eric' <<u>nuchims.eric@epa.gov</u>>
Cc: Mike Bowes (<u>mike.bowes@tripointhomes.com</u>) <<u>mike.bowes@tripointhomes.com</u>>; 'Peter Morris'
<<u>peterm@westenvironmental.com</u>>; Nowell, Keith, Env. Health <<u>Keith.Nowell@acgov.org</u>>
Subject: RE: 1708 Wood Street Development

Good Afternoon Eric:

Thank you for the notification regarding dust control complaint at the subject property. Mike and Peter can you please provide a status update on this site and the complaint.

Thanks,

Dilan Roe, PE, C73703 *Chief – Land Water Division* Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Alameda, CA 510.567.6767; Ext. 36767 QIC: 30440 dilan.roe@acgov.org

From: Nuchims, Eric [mailto:nuchims.eric@epa.gov]
Sent: Thursday, July 26, 2018 9:28 AM
To: Roe, Dilan, Env. Health <<u>Dilan.Roe@acgov.org</u>>
Subject: 1708 Wood Street Development

Dilan

I received a complaint from one of the residents across Campbell Street from the 1708 Wood Street Development by TriPointe Homes. The complaint states that proper dust control is not being applied appropriately during excavation of the suspected or known contaminated soils.

If you need to contact me directly please try my cell phone at 628-217-0699

Alternatively, I'm expecting a draft of the final draft of the Bercovich Lead Smelter Removal soon and will share it with you once it has been finalized.

Sincerely

Eric Nuchims Federal On-Scene Coordinator U.S. Environmental Protection Agency - Region IX Superfund - Emergency Response Section 75 Hawthorne Street Mail Code: SFD-9-2 San Francisco, CA 94105 Desk Phone: 415 972-3252

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REMOVAL ACTION REPORT

Bercovich Lead Smelter Removal Action Oakland, Alameda County, California



Prepared for:

U.S. Environmental Protection Agency Region 9 Emergency Response Section

75 Hawthorne Street San Francisco, CA 94105

EPA Contract Number: EP-S5-13-02 Document Control Number: 0163-08-ABOR TDD No. 0002/1302-T2-R9-17-08-0002

August 2018

Prepared by:



WESTON SOLUTIONS, INC. 2300 Clayton Rd., Suite 900 Concord, CA 94520

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LIST OF ABBREVIATIONS AND ACRONYMS

%	percent
bgs	below ground surface
DTSC	Department of Toxic Substances Control
EMCON	EMCON Associates
EPA	U.S. Environmental Protection Agency
ERRS	Emergency and Rapid Response Services
ESA	Environmental Site Assessment
MCE	mixed-cellulose ester
mg/kg	milligrams per kilogram
mg/m ³	milligrams per cubic meter
OSC	On-Scene Coordinator
PA	Preliminary Assessment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RM	Response Manager
RSL	Regional Screening Level
SAP	Sampling and Analysis Plan
START	Superfund Technical Assessment and Response Team
TDD	Technical Direction Document
USCG	United States Coast Guard
UST	underground storage tank
WESTON®	Weston Solutions, Inc.
XRF	X-ray fluorescence

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked the Weston Solutions, Inc. (WESTON[®]) Superfund Technical Assessment and Response Team (START) to assist with removal action activities at the Bercovich Lead Smelter Removal Action Site (the Site) located in Oakland, Alameda County, California (Appendix A, Figure 1). Under Technical Direction Document (TDD) No. 0002/1302-T2-R9-17-08-0002, START was tasked to provide technical support for documentation, monitoring, and sampling activities at the Site. The Site encompasses one city block in neighborhood of West Oakland where a historic smelter used to operate. Removal action activities were conducted from April 17 through May 14, 2018.

The Bercovich Smelter Removal Action was initiated to mitigate the exposure to soil with levels of lead above the EPA Regional Screening Level (RSL) for residences of 400 milligrams per kilogram (mg/kg) (EPA, 2018) which was identified during the EPA Removal Assessment conducted in June and August 2017.

This Removal Action Report is organized into the following sections:

- Section 1: Introduction Briefly describes the removal action project
- Section 2: Site Background Describes the Site location and summarizes the known regulatory history.
- Section 3: Removal Activities Discussion of removal activities and procedures, work plans, photographic documentation, air monitoring and sampling, excavation and restoration activities, post-excavation sampling, property-specific removal actions, and disposal of contaminated soils.
- Section 4: Data Validation Describes data validations, blank contaminations and reporting limits.
- Section 5: Demobilization A brief statement of demobilization from Site specifics.
- Section 6: Summary Provides a summary of the removal action activities.
- Section 7: References Presents the references used in the preparation of this report.

2. SITE BACKGROUND

2.1 SITE DESCRIPTION

The Site is located in Oakland, Alameda County, California. The Site consists of select properties located within one city block of the West Oakland neighborhood (Appendix A, Figure 2). There are residential properties on this block, along with several commercial properties, including a trucking repair company and a restaurant. The Site is approximately 2.0 acres in size and at an

elevation of approximately 10 feet above sea level. The geographical coordinates for the approximate center of the Site are $37^{\circ} 48' 51''$ north latitude and $122^{\circ} 17' 34''$ west longitude.

2.2 SITE HISTORY

In 1989, a Phase I/II Environmental Site Assessment (ESA) was conducted by EMCON Associates (EMCON) for a potential buyer of the former historic smelter. During the Phase I ESA, a total of six soil samples were collected from three sampling locations at depths of 1 foot below ground surface (bgs) and 3 feet bgs, and were analyzed for metals. Groundwater samples collected during the Phase I ESA were also analyzed for metals. During the Phase II ESA, 45 soil samples were collected from 15 sampling locations at depths of 1 foot bgs, 3 feet bgs, and 5 feet bgs, and analyzed for lead. In addition, groundwater samples were collected at the former smelter during the Phase I/II ESA and analyzed for petroleum hydrocarbons, volatile organic compounds, and pH. Lead was reported in soil samples collected during the Phase I and II ESAs at maximum concentrations of 878 mg/kg and 1,100 mg/kg, respectively, exceeding the EPA residential Preliminary Remediation Goal of 400 mg/kg (EMCON, 1989). No other concerns were reported. The data collection effort and background information related to the former smelter are documented in the *Level I Environmental Assessment and Level II Shallow Soil and Groundwater Characterization* (EMCON, 1989).

In 1992 and 1995, several inspections were conducted by the Alameda County Environmental Health Department and only minor violations (e.g., open and unlabeled hazardous waste drums) were reported. In addition, in 1998 or 1999, an underground storage tank (UST) survey of a 500-gallon UST used to store diesel fuel was conducted by the Oakland Fire Department at the former smelter. According to the survey, a release to the environment was suspected but not confirmed. A Preliminary Assessment (PA) was conducted by the Department of Toxic Substances Control (DTSC) for the EPA in 2002. The PA report indicated that elevated levels of lead exist at the former smelter (DTSC, 2003).

Based on the sampling results of the Phase I/II ESA and PA for the former smelter, EPA determined that 13 residential properties warranted further assessment based on the proximity of the residences to the Site; however, access to conduct a removal assessment was initially only granted by six property owners. Access to the remaining properties was granted by owners after the first phase of the Removal Assessment.

2.3 PREVIOUS INVESTIGATIONS

In June and August 2017, EPA conducted a removal assessment of the 13 residential properties previously identified. Samples were collected from three depth intervals: 0-2 inches, 2-6 inches, and 6-12 inches. Samples were analyzed by X-ray fluorescence (XRF) and the EPA Region 9 Laboratory for lead; results ranged from 393 mg/kg to 2,874 mg/kg. Results from 11 parcels exceeded the EPA RSL for lead at residences of 400 mg/kg. The remaining two residential parcels were completely covered in concrete or other hard surface which prevented sampling.

3. REMOVAL ACTIVITIES

The following sections describe the removal activities at the Site.

3.1 REMOVAL ACTION ACTIVITIES

The EPA determined that soil removal actions were warranted at 11 residential properties based on results from the Removal Assessment conducted in June and August 2017. Soil samples from the Removal Assessment were analyzed for lead and the results ranged from 393 ppm to 2,874 ppm (Appendix A, Figure 3). Removal action activities were performed at all of the 11 properties identified during the Removal Assessment. Property-specific activities as part of this removal action are discussed in Section 3.2.

The following sections describe the overall procedures and activities followed for each property.

3.1.1 Access Agreements and Pre-Remediation Work Plans

An access agreement and Pre-Remediation Work Plan (work plan) were prepared for each identified property during the summer of 2017. Prior to the preparation of each property's work plan, EPA, START, and Emergency and Rapid Response Services (ERRS) personnel conducted a walkthrough of the property with the property owner to review and define the schedule of activities, methods and locations of excavation, restoration plans, materials and sources, decontamination procedures, property owner questions and concerns, existing property conditions, and physical site information. Following preparation of a property-specific work plan, the content was reviewed and signed for approval by the property owner, the EPA On-Scene Coordinator (OSC), and the ERRS Response Manager (RM) prior to removal actions.

3.1.2 Photographic Documentation

Photographs and/or video were used to document pre- and post-removal action conditions of each property. Photographs were taken by START prior to removal activities and as soon as practical following completion of backfill and restoration of the excavated areas for any given property. Photographic documentation of typical removal activities is presented in Appendix C.

3.1.3 Air Monitoring and Sampling

Prior to the initiation of any dust-generating activities at a property, four property or work zone perimeter air monitoring/sampling stations were established. The location of each station was used to determine whether airborne particulates were becoming airborne or migrating from work zones or off of the property at concentrations above the Site-specific action levels. Each air monitoring/sampling station included a DustTrak Aerosol Monitor, collocated with a GilAir5 Tri-Mode Air Sampler equipped with a 37-millimeter, 0.8-micrometer mixed-cellulose ester (MCE)

filter cassette for lead analysis. A DustTrak Aerosol Monitor was placed adjacent to the clean backfill material to monitor particulate conditions in the staging area.

Per the Sampling and Analysis Plan (SAP), daily air monitoring and sampling procedures were instituted throughout the removal action during dust generating activities. Each day, prior to the beginning of any dust-generating field activities, sample pumps equipped with sample media were calibrated and deployed in conjunction with particulate monitors to the property/work zone perimeter locations. The monitors and sample pumps were checked periodically during work hours to confirm they were operating properly and then collected following completion of work each day.

Per the Site-specific Health and Safety Plan, the action level for sustained particulate readings was 1.5 milligrams per cubic meter (mg/m³). Throughout the entire project, there were no readings which exceeded this action level. None of the MCE filter samples which were submitted to the laboratory exceeded the Occupational Safety and Health Administration's Permissible Exposure Limit of 0.05 mg/m³ for lead.

Two United States Coast Guard (USCG) Strike Team members were onsite during contaminated soil removal activities. The USGC Strike Team provided assistance with Health and Safety oversight, including the air monitoring and sampling equipment.

3.1.4 Backfill Source Selection and XRF Analysis

Prior to Site mobilization, the EPA and ERRS contractor identified sources for backfill materials to use to restore the residential properties following the removal of contaminated soils. During the removal action, START collected samples of the fill materials and analyzed them with the XRF to determine concentrations of Resource Conservation and Recovery Act (RCRA) 8 metals (lead, arsenic, barium, cadmium, chromium, mercury, selenium, and silver). Each five-point composite sample was collected from five random locations from at least every 500 cubic yards of backfill material. Each of the five 4-ounce samples that made up the composite sample were collected using a disposable plastic scoop and homogenized into one composite sample. All backfill material samples were field-analyzed using the XRF and 10 percent (%) of field-analyzed samples were submitted for laboratory analysis for confirmation. The sampling results for each fill sample are presented in Appendix B, Table 1. All RCRA 8 metals concentrations from XRF analysis and laboratory analysis of fill materials were below their respective EPA RSL for residential soil. The data validation reports and laboratory data packages are provided in Appendix D.

All soil and backfill material samples collected during the removal action were field-analyzed using XRF via Solid Waste-846 Method 6200. For confirmation analysis of RCRA 8 metals concentrations, 10% of samples field-analyzed by the XRF were sent to the EPA Region 9 Laboratory in Richmond, California. Samples were then routinely sent to the EPA Region 9 Laboratory to fulfill the 10% confirmation requirement and to ensure the XRF precision and accuracy was consistent and acceptable throughout the removal action. The R² value for laboratory and XRF lead results was 0.9921; therefore, the XRF data for lead collected during this removal assessment qualify as definitive analytical data under EPA's criteria for use as definitive level data (R² \geq 0.9 or 90 percent). A lead XRF analysis and laboratory analysis correlation graph is shown on Figure 4.

3.1.5 Additional Assessment Sampling

The backyard of Residence 8 was not able to be accessed during the Removal Assessment in June or August of 2017 due to access issues. The only way to access the back yard is to walk through the house. On May 5, 2018, the backyard fence was taken down to allow access for the ERRS crew. Prior to excavation, EPA and START collected composite samples from 0-2 inches, 2-6 inches, and 6-12 inches bgs, per the SAP for the Removal Assessment. Results are contained in Table 2 and show the soils that exceeded the EPA RSL for residences of 400 mg/kg.

3.1.6 Excavation and Restoration Activities

Following work plan approval, ERRS personnel were mobilized to the identified properties for removal of contaminated soils. On several of the properties, extensive clearing of brush and debris had to be performed prior to excavation. As described in the work plans, the debris was removed from each property into segregated roll-off bins, and not replaced. Contaminated soils were excavated to a depth of one foot bgs by ERRS contractor personnel using various heavy equipment and techniques, including equipment excavation and hand-digging. In total, 665 tons of contaminated soil were excavated from the residences and approximately 886 tons of clean backfill materials were used for restoring all the properties.

Prior to backfilling excavated areas, START provided sampling and analysis (as described in Section 3.1.7) to document the concentrations of the remaining lead in the soil. A visual barrier/marker (orange snow fencing) was placed over the excavation floor. The visual barrier was installed to mark the extent of the clean fill for any future excavation work by the property owner.

Excavation areas were backfilled by ERRS personnel with the appropriate clean fill materials and compacted, graded, and restored to final landscaping grade in accordance with the property's approved work plan. Materials used for backfill and site restoration included common soil, topsoil, 3/8" pea gravel, and playground fiber mulch. All applicable backfill materials were analyzed by START prior to use (as described in Section 3.1.5) to document that concentrations of RCRA 8 metals were significantly below any human-health-risk-based benchmarks and acceptable for use.

There were several tree or planter boxes along the sidewalks throughout the Site. To the extent possible, soil was removed using hand tools and backfilled with clean materials. A full 12 inches was not able to be excavated in these areas due to trees and shallow roots.

During soil excavation and remediation actions, START documented activities in written log books and in an electronic map via the Environmental Systems Research Institute, Inc. Geographic Information System (ArcGIS[®]) application for real-time project tracking.

3.1.7 Post-Excavation Activities

START conducted soil sampling of the excavation floor at each of the excavation areas in order to document the concentrations of lead at the limit of excavation in those areas and in accordance with the procedures identified in the SAP. The lead concentrations left in place under the backfill for each excavated property are presented in Table 1. A visual barrier/marker

(orange snow fencing) was placed over the excavation floor prior to backfill.

Following removal actions at each property, the EPA OSC reviewed the completed work with each property owner. Each property work plan was approved and signed by the property owner, the EPA OSC, and the ERRS RM indicating completion of the removal action.

3.2 PROPERTY-SPECIFIC ACTIVITIES

The general work practices at each property have been discussed and identified in Sections 3.1.1 through 3.1.7. A summary of property-specific removal actions, including contaminated soil estimated removal volumes, is provided in Table 3. All residents were able to stay in their homes during removal activities. If residents were present during excavation activities, it was recommended for them to stay inside with the windows closed. Following excavation activities, lead results at all properties in the bottom of the excavations exceeded the EPA RSL of 400 mg/kg for lead. Excavation and restoration activities were completed at the 11 properties.

3.3 TRANSPORTATION AND DISPOSAL

Excavated soil and any general debris was placed into a lined 20-yard roll-off box on or directly adjacent to each residential property. Once full, the roll-off boxes were cleaned to remove any excess soil and properly covered. After the roll-off boxes were ready to be transported over the public roads, they were staged in the Staging Area for pickup by the disposal company. Loading and transport activities at residential yards were generally performed at the same rate as excavation to eliminate the need for stockpiling large quantities of material on the residential properties.

A total of 665 tons of contaminated soil was disposed of at the Clean Harbors Buttonwillow Landfill in Buttonwillow, California. A total of 200 cubic yards of potentially contaminated general debris and 30 cubic yards of potentially contaminated concrete debris was disposed of at the Clean Harbors Buttonwillow Landfill as well.

Three inoperable cars were located on two of the properties which needed to be moved prior to starting excavation. EPA and the ERRS contractor worked closely with the homeowners to help arrange for their donation to the charity, Kars4Kids.

3.4 STAGING AREA

The Staging Area was located at 1708 Wood Street in Oakland, California, which was a nonoperational trucking yard directly adjacent to the Site, across Campbell Street (Figure 5). The Staging Area was comprised of an asphalt parking lot surrounded by two rows of security fencing. Temporary fence panels were installed to delineate the Staging Area, and separate it from the remainder of the property. One portable office trailer was present with electrical service being supplied via diesel-powered generator. The Staging Area was used for parking vehicles and heavy equipment, as well as stockpiling and loading of clean backfill materials. Empty roll-off bins were delivered to the Staging Area, then transported to a residential property to be filled. Filled roll-off bins were stored at the Staging Area, but only after being properly tarped and removing any excess soil from the exterior prior to being transported.

To determine if staging activities impacted the Staging Area, surface soil samples were collected on April 18, 2018, before activities commenced, and again after demobilization, on May 14, 2018. The entire surface of the Staging Area was covered in asphalt surrounded by a concrete berm. Three samples were collected in the areas where a break in the berm was present. One sample was collected outside of the Staging Area, located next to the fire hydrant which was constantly used as a water source.

The samples were analyzed for volatiles using EPA Method 8260B, semivolatiles using EPA Method 9270C, polychlorinated biphenyls using EPA Method 8082A, total metals using EPA Method 6010B, and mercury using EPA Method 7471A. All samples were analyzed by the EPA Region 9 Laboratory in Richmond, California.

Comparison of the baseline and verification sample results indicate no contaminants were introduced to the Staging Area as a result of removal activities. Sampling results are summarized in Table 4. The data validation reports and laboratory data packages are provided in Appendix D.

4. DATA VALIDATION

Laboratory data collected during the Bercovich Smelter Removal Action underwent a Tier 2 (Stage 2A) review by a WESTON chemist. The data validation package included documentation and quality control data provided by the laboratory, including custody records, shipping information, sample preparation/extraction records, and instrument calibration and method blank data.

The data validation was conducted in general accordance with the EPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2017a) and *Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (EPA, 2017b), using quality control limits specific to the methods being used for the sample analyses. Laboratory validation reports for all samples collected during this removal action are presented in Appendix D.

5. DEMOBILIZATION

On May 14, 2018, EPA, START, and ERRS personnel demobilized from the Site, along with all equipment and temporary facilities. After the office trailer and equipment had been demobilized, START collected samples from the Staging Area as described in Section 3.4.

6. SUMMARY

The objective of the removal action was to reduce the potential threat to human health from exposure to elevated lead concentrations in surface and subsurface soils at the Site. In total, 11 properties were addressed during this removal action. A total of 665 tons of contaminated soil

was excavated from yards and disposed of at the Buttonwillow Landfill. The excavations were backfilled to original grade, compacted, and finished with various ground covers. Backfill materials were tested prior to use.

To document the concentration of lead at the bottom of each excavation, composite soil samples were collected and analyzed for lead using the XRF. Lead at all 11 properties exceeded the EPA RSL of 400 mg/kg. A visual barrier of orange snow fence was placed at the bottom of each excavation. Samples collected from the Staging Area indicated that contaminates were not introduced to the Staging Area from the removal action activities.

7. **REFERENCES**

- Department of Toxic Substances Control (DTSC). 2003. Preliminary Assessment, A. Bercovich 1639 18th Street, Oakland, California. April.
- U.S. Environmental Protection Agency (EPA). 2018. Regional Screening Levels for Chemical Contaminants at Superfund Sites. <u>https://www.epa.gov/risk/regional-screening-levels-rsls</u>. Accessed 1 June 2018.
- EMCON Associates (EMCON). 1989. Level I Environmental Assessment and Level II Shallow Soil and Groundwater Characterization.
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- Weston Solutions, Inc. (WESTON). 2017. Sampling and Analysis Plan, Bercovich Lead Smelter Site, Oakland, Alameda County, California. June.
- WESTON. 2018. Bercovich Lead Smelter Removal Assessment, Removal Assessment Sampling Report, Oakland, Alameda County, California. March.

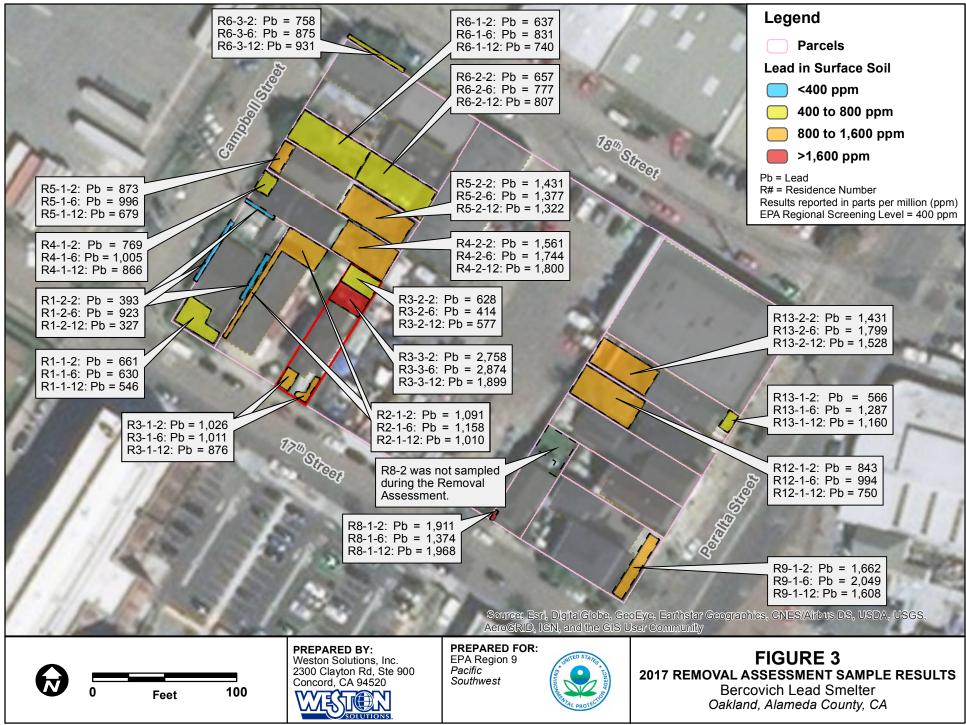
APPENDIX A FIGURES



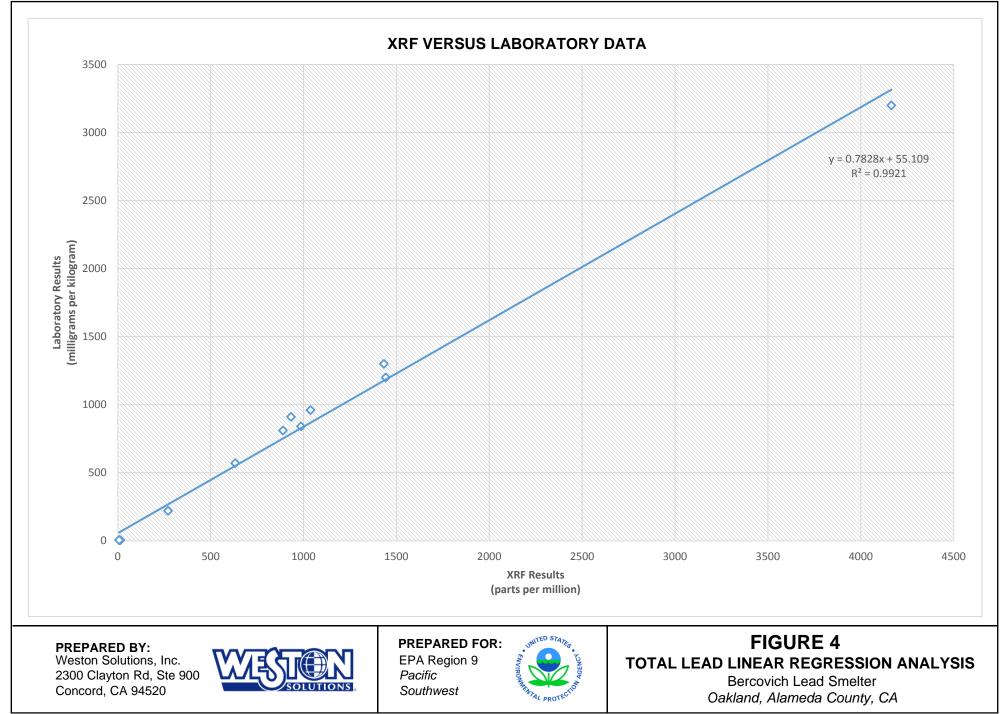
Contract: EP-S5-13-02; TDD: 0002/1302-T2-R9-17-08-0002



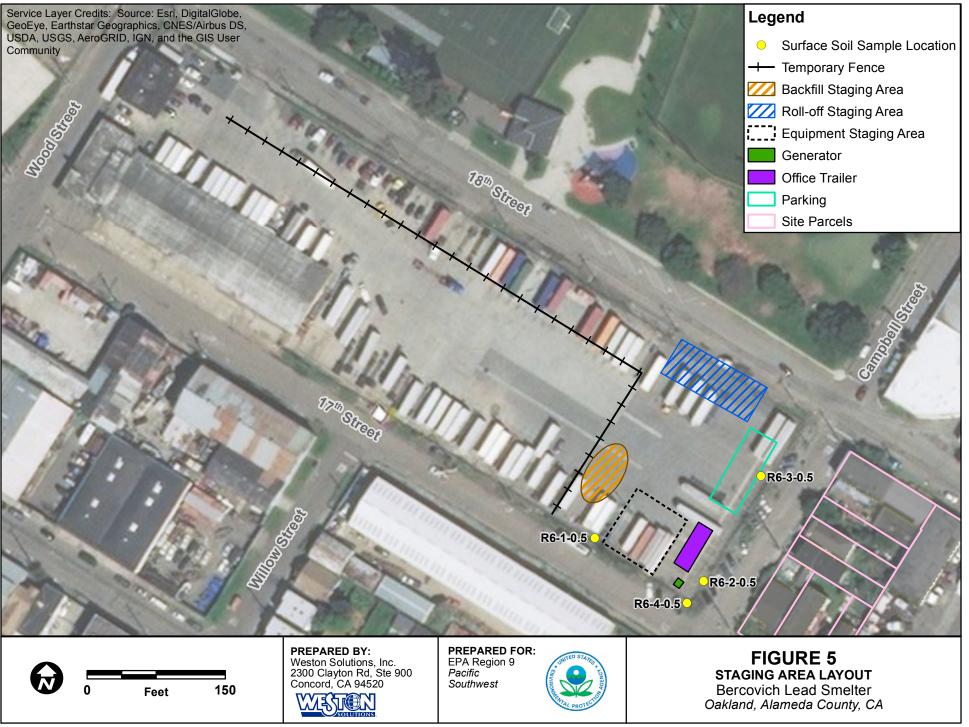
Contract: EP-S5-13-02; TDD: 0002/1302-T2-R9-17-08-0002



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Contract: EP-S5-13-02; TDD: 0002/1302-T2-R9-17-08-0002

APPENDIX B TABLES

Table 1 Summary of RCRA 8 Metals Results for Top Soils and Backfill Soils Bercovich Lead Smelter Removal Action Oakland, Alameda County, California

Analyte	EPA Residential RSL	Topsoil-1	Backfill-1	Backfill-3	Topsoil-3	Backfill-6			
(mg/kg)	(mg/kg)	4/20/2018 16:05	4/23/2018 14:37	4/26/2018 11:02	4/30/2018 16:34	5/10/2018 14:34			
	6010C and 7473								
Arsenic	100	4.9	4.5	4.7	4.4	5			
Barium	1,500	170	160	180	170	250			
Cadmium	7	0.5 U	0.5 U	0.5 U	0.5 U	ND U			
Chromium	12,000	39	28	32	40	30			
Lead	400	3.9	4.5	5.8	4.1	4.7			
Mercury	23	0.029 UJ	0.56 J	0.13 J	0.03 UJ	0.12 J			
Selenium	39	2 U	2 U	2 U	2 U	ND U			
Silver	39	1 U	1 U	1 U	1 U	ND U			
Analyte (ppm)	EPA Residential RSL	Topsoil-1	Backfill-1	Backfill-3	Topsoil-3	Backfill-6			
Analyte (ppiii)	(mg/kg)	4/20/2018 16:05	4/23/2018 14:37	4/26/2018 11:02	4/30/2018 16:34	5/10/2018 14:34			
Metals by ¹ XRF									
Arsenic	100	7.6 ±0.8	7.8 ±0.7	6.4 ±0.7	6.7 ±0.8	5.2 ±0.6			
Barium	1,500	884 ±51	457 ±40	544 ±41	948 ±52	573 ±41			
Cadmium	7	ND	ND	ND	ND	ND			
Chromium	12,000	102 ±7	120 ±6	92 ±6	90 ±7	91 ±6			
Lead	400	12.3 ±0.8	7.5 ±0.6	7.9 ±0.6	13 ±0.8	7 ±0.6			
Mercury	23	4.5 ±0.7	2.7 ±0.6	2.5 ±0.6	4.4 ±0.7	2.5 ±0.6			
Selenium	39	ND	ND	ND	ND	ND			
Silver	39	ND	ND	ND	ND	ND			
Analyte (ppm)	EPA Residential RSL	Backfill-2	Topsoil-2	Backfill-4	Topsoil-4	Backfill-5			
	(mg/kg)	4/24/2018 16:01	4/26/2018 12:41	4/30/2018 16:57	5/8/2018 15:44	5/8/2018 15:46			
Metals by ¹ XRF	7								
Arsenic	100	6.6 ±0.7	7.3 ±0.8	4.6 ±0.6	7.4 ±0.8	6.1 ±0.7			
Barium	1,500	488 ±41	832 ±51	494 ±40	887 ±51	560 ±41			
Cadmium	7	ND	ND	ND	ND	ND			
Chromium	12,000	107 ±6	119 ±7	84 ±6	112 ±7	81 ±6			
Lead	400	7 ±0.6	11.9 ±0.8	7.6 ±0.6	13 ±0.8	7.3 ±0.6			
Mercury	23	2 ±0.6	5.9 ±0.7	2.2 ±0.6	5.1 ±0.7	2.4 ±0.6			
Selenium	39	ND	ND	ND	ND	ND			
Silver	39	ND	ND	ND	ND	ND			

Analyte (ppm)	EPA Residential RSL (mg/kg)	Topsoil-5 5/10/2018 14:23		-	l-5 dup 18 15:30						
Metals by ¹ XRF											
Arsenic	100	8	±0.8	7	±0.8						
Barium	1,500	827	±51	829	±51						
Cadmium	7	ND		ND							
Chromium	12,000	78	±7	84	±7						
Lead	400	12.1	±0.7	12.6	±0.8						
Mercury	23	5	±0.7	4.4	±0.7						
Selenium	39	ND		ND							
Silver	39	ND		8	±3						

Notes:

1 = Analysis by Innov-X XRF in soil mode with 90-second run time
EPA = U.S. Environmental Protection Agency
EPA Site Lead in residential soil is 400 mg/kg
Bold = Detected Result
dup = Field Duplicate
J = result is estimated
mg/kg = milligrams per kilogram
ND = analyte not detected
ppm = parts per million
RCRA = Resource Conservation & Recovery Act
U = analyte not detected, reporting limit shown
XRF = X-ray fluorescence

Table 2 Summary of Lead Results in Residence Soils Bercovich Lead Smelter Removal Action Oakland, Alameda County, California

Sample Number	Sample Location	Decision Unit	Sample Depth (inches)	¹ XRF Lead (ppm)	Lab Lead (mg/kg)
EPA Site-Specific S			· · · ·	(ppm) 4(
R1-1-1		1	12	270.0	220
R1-2-1		2	12	394	
R1-3-1	Residence 1	3	12	601	
R1-4-1	_	4	12	895	
R1-5-1		5	12	302	
R2-1-1		1	12	320	
R2-2-1	Residence 2	2	12	180.9	
R3-1-1		1	12	341	
R3-2-1		2	12	503	
R3-3-1	Residence 3	3	12	1,152	
R3-4-1		4	12	1,742	
R4-1-1		1	12	986	
R4-2-1	Residence 4	2	12	1,439	
R4-3-1		3	12	1,128	
R5-1-1		1	12	986	840
R5-2-1	Residence 5	2	12	1,171	
R6-1-1		1	12	564	
R6-2-1		2	12	632	570
R6-3-1		3	12	1,442	1,200
R6-3-1 dup	Residence 6	3	12	1,432	1,300
R6-4-1	Residence 6	4	12	385	
R6-5-1		5	12	515	
R6-6-1		6	12	798	
R6-Garden			0 - 3	249.5	
R8-1-1		1	12	1,720	
R8-2-1		2	12	2,351	
R8-2-2	Residence 8	2	0 - 2	3,143	
R8-2-6		2	2 - 6	4,164	3,200
R8-2-12		2	6 - 12	3,482	
R9-1-1	Residence 9	1	12	932	910
R9-1-1 dup	Kesidence 9	1	12	1,037	960
R12-1-1	Residence 12	1	12	889	810
R13-3-1	Residence 13	3	12	1,438	

Notes:

1 = Analysis by Innov-X XRF in soil mode with 90-second run time

Lead analysis by EPA Method 6010C

EPA Site-specific screening level for lead is 400 mg/kg

Bold = Result exceeds screening level

dup = Field Duplicate

mg/kg = milligrams per kilogram

ppm = parts per million

XRF = X-ray fluorescence

Table 3Removal Properties InformationBercovich Lead Smelter Removal ActionOakland, Alameda County, California

Residence Number	Start Date	Completion Date	Estimated Soil Removed (tons)		
Residence 1	4/25/2018	5/12/2018	80		
Residence 2 and 3	4/30/2018	5/12/2018	130		
Residence 4	4/20/2018	5/10/2018	90		
Residence 5	4/21/2018	5/11/2018	60		
Residence 6 and 7	4/19/2018	5/13/2018	170		
Residence 8	5/5/2018	5/11/2018	55		
Residence 9	5/10/2018	5/11/2018	10		
Residence 12	5/7/2018	5/12/2018	30		
Residence 13	5/5/2018	5/9/2018	40		

	R0-1-0.5	R0-1-0.5	R0-2-0.5	R0-2-0.5	R0-3-0.5	R0-3-0.5	R0-4-0.5	R0-4-0.5
Analyte	4/18/2018 9:05	5/14/2018 16:05	4/18/2018 9:15	5/14/2018 16:10	4/18/2018 9:30	5/14/2018 16:15	4/18/2018 10:30	5/14/2018 16:20
Metals (mg/kg)								
Arsenic	17	20	11	9.1	15	14	11	12
Barium	250	310	250	220	220	250	160	150
Cadmium	1.9	3.9	2.5	2	3.2	3.2	1.4	1.5
Chromium	76	59	55	46	58	48	56	55 J
Lead	220	180	250	150	340	410	660	610 J
Mercury	0.39	0.58 J	0.19	0.22 J	0.4	0.5 J	0.22	0.25 J
Selenium	3 U	2.9 U	2.2 U	2 U	2.9 U	2 U	2.2 U	2 U
Silver	1.5 U	1.4 U	1.1 U	1 U	1.4 U	1 U	1.1 U	1 U
TPH (mg/kg)								
TPH - Diesel Range Organics	490 F13	500 J, F13	160 F13	200 J, F13	98 F13	320 J, F13	110 F13	92 J, F13
TPH - Gasoline Range Organics	9.7 F13	14 U	9.9 U	8.3 U	6.8 U	7.3 U	5.2 U	6 U
TPH - Oil Range Organics	3,900 F5	3,900 J, F13	1,900 F5	1,500 J, F13	860 F5	2,900 J, F13	1,100 F5	820 J, F13
PCBs (µg/kg)								
Aroclor 1016	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1221	40 U	39 U	30 U	27 U	39 U	27 U	30 U	27 U
Aroclor 1232	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1242	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1248	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1254	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1260	18 J	33 J	19	15 J	15 J	18 J	24	23 J
Aroclor 1262	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
Aroclor 1268	19 U	19 U	15 U	13 U	19 U	13 U	14 U	13 U
VOCs (µg/kg)								
1,1,1-Trichloroethane	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,1,2,2-Tetrachloroethane	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,1,2-Trichloroethane	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
1,1-Dichloroethane	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,1-Dichloroethene	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,1-Dichloropropene	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,2,3-Trichloropropane	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
1,2-Dibromo-3-chloropropane	19 UJ	20 UJ	11 UJ	17 UJ	16 UJ	14 U	12 UJ	13 U
1,2-Dibromoethane (EDB)	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
1,2-Dichlorobenzene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 UJ	3.3 U
1,2-Dichloroethane	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U

	R0-1-0.5	R0-1-0.5	R0-2-0.5	R0-2-0.5	R0-3-0.5	R0-3-0.5	R0-4-0.5	R0-4-0.5
Analyte	4/18/2018 9:05	5/14/2018 16:05	4/18/2018 9:15	5/14/2018 16:10	4/18/2018 9:30	5/14/2018 16:15	4/18/2018 10:30	5/14/2018 16:20
VOCs (µg/kg), continued								
1,2-Dichloropropane	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
1,3-Dichlorobenzene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 UJ	3.3 U
1,3-Dichloropropane	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
1,4-Dichlorobenzene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 UJ	3.3 U
2-Butanone (MEK)	37 U	40 U	22 UJ	34 J	67	29 U	23 U	27 U
2-Hexanone	37 UJ	40 UJ	22 UJ	34 UJ	32 UJ	29 U	23 U	27 U
4-Methyl-2-pentanone (MIBK)	37 UJ	40 U	22 UJ	34 UJ	32 UJ	29 U	23 U	27 U
Acetone	30 J	40 U	11 J	34 J	900	29 J	23 U	54 J
Benzene	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Bromodichloromethane	4.7 UJ	5 U	2.8 UJ	4.2 U	4 UJ	3.6 U	2.9 UJ	3.3 U
Bromoform	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
Bromomethane	4.7 UJ	5 U	2.8 UJ	4.2 U	4 UJ	3.6 U	2.9 UJ	3.3 U
Carbon disulfide	4.7 UJ	5 U	2.8 UJ	4.2 U	4 UJ	3.6 U	2.9 UJ	3.3 U
Carbon tetrachloride	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Chlorobenzene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 UJ	3.3 U
Chlorodibromomethane	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 UJ	3.3 U
Chloroethane	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Chloroform	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Chloromethane	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
cis-1,2-Dichloroethene	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
cis-1,3-Dichloropropene	4.7 UJ	5 U	2.8 UJ	4.2 U	4 UJ	3.6 U	2.9 UJ	3.3 U
Dichlorodifluoromethane	4.7 U	5 UJ	2.8 UJ	4.2 UJ	4 U	3.6 UJ	2.9 U	3.3 UJ
Dichloromethane	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Ethylbenzene	4.7 UJ	5 U	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
m&p-Xylene	5.4 J	10 U	5.6 UJ	8.4 UJ	4.3 J	7.2 U	4.6 J	6.7 U
o-Xylene	4.7 UJ	5 U	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
Styrene	4.7 UJ	5 U	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
tert-Butyl methyl ether (MTBE)	19 U	20 U	11 U	17 U	16 U	14 U	12 U	13 U
Tetrachloroethene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
Toluene	4.7 UJ	5 UJ	2.8 UJ	4.2 UJ	4 UJ	3.6 U	2.9 U	3.3 U
trans-1,2-Dichloroethene	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
trans-1,3-Dichloropropene	4.7 UJ	5 U	2.8 UJ	4.2 U	4 UJ	3.6 U	2.9 UJ	3.3 U
Trichloroethene	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Trichlorofluoromethane	4.7 U	5 U	2.8 UJ	4.2 U	4 U	3.6 U	2.9 U	3.3 U
Vinyl chloride	4.7 U	5 U	2.8 U	4.2 U	4 U	3.6 U	2.9 U	3.3 U

	R0-1-0.5	R0-1-0.5	R0-2-0.5	R0-2-0.5	R0-3-0.5	R0-3-0.5	R0-4-0.5	R0-4-0.5
Analyte	4/18/2018 9:05	5/14/2018 16:05	4/18/2018 9:15	5/14/2018 16:10	4/18/2018 9:30	5/14/2018 16:15	4/18/2018 10:30	5/14/2018 16:20
SVOCs (µg/kg)								
1,2,4-Trichlorobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
1,2-Dichlorobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
1,3-Dichlorobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
1,4-Dichlorobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
2,4,5-Trichlorophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2,4,6-Trichlorophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2,4-Dichlorophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2,4-Dimethylphenol	2,500 UJ	7,900 U	1,900 UJ	5,200 U	2,500 UJ	5,200 U	1,900 UJ	5,200 U
2,4-Dinitrophenol	10,000 UJ	31,000 UJ	7,600 UJ	21,000 UJ	9,700 UJ	20,000 UJ	7,500 UJ	20,000 UJ
2,4-Dinitrotoluene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
2,6-Dinitrotoluene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
2-Chloronaphthalene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
2-Chlorophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2-Methylnaphthalene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	210 J	1,000 U
2-Methylphenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2-Nitroaniline	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
2-Nitrophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
3&4-Methylphenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
3,3'-Dichlorobenzidine	490 UJ	7,900 U	370 UJ	5,200 U	480 UJ	5,200 U	370 UJ	5,200 UJ
3-Nitroaniline	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 UJ
4,6-Dinitro-2-methylphenol	2,500 UJ	7,900 U	1,900 UJ	5,200 U	2,500 UJ	5,200 U	1,900 UJ	5,200 UJ
4-Bromophenyl phenyl ether	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
4-Chloro-3-methylphenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
4-Chloroaniline	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 UJ
4-Chlorophenyl phenyl ether	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
4-Nitroaniline	2,500 UJ	7,900 UJ	1,900 UJ	5,200 UJ	2,500 UJ	5,200 UJ	1,900 UJ	5,200 UJ
4-Nitrophenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
Acenaphthene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Acenaphthylene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	190 J	1,000 U
Anthracene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Benzo(a)anthracene	490 U	1,500 U	260 J	1,000 U	460 J	850 J	500	600 J
Benzo(a)pyrene	490 U	1,500 U	310 J	1,000 U	570	900 J	660	550 J
Benzo(b)fluoranthene	600	1,200 J	940	1,600 J	1,700	1,300 J	1,400	1,400 J
Benzo(g,h,i)perylene	340 J	860 J	420	1,000 U	500	700 J	350 J	880 J
Benzo(k)fluoranthene	250 J	1,500 U	240 J	1,000 U	450 J	1,000 U	360 J	1,000 UJ

	R0-1-0.5	R0-1-0.5	R0-2-0.5	R0-2-0.5	R0-3-0.5	R0-3-0.5	R0-4-0.5	R0-4-0.5
Analyte	4/18/2018 9:05	5/14/2018 16:05	4/18/2018 9:15	5/14/2018 16:10	4/18/2018 9:30	5/14/2018 16:15	4/18/2018 10:30	5/14/2018 16:20
SVOCs (µg/kg), continued								
Benzyl alcohol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
Bis(2-chloro-1-methylethyl) ether	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Bis(2-chloroethoxy)methane	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Bis(2-chloroethyl)ether	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Bis(2-ethylhexyl) phthalate	8,000	3,900 J	1,800	7,700 J	2,700	1,000 U	660	4,400 J
Butyl benzyl phthalate	570	1,500 U	2,600	760 J	540	1,000 U	370 U	18,000 J
Carbazole	490 UJ	1,500 U	370 UJ	1,000 U	480 UJ	1,000 U	370 UJ	1,000 UJ
Chrysene	680	1,400 J	800	990 J	1,200	1,100 J	760	1,400 J
Dibenz(a,h)anthracene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 UJ
Dibenzofuran	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Diethyl phthalate	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Dimethyl phthalate	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Di-n-butyl phthalate	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	580 J
Di-n-octyl phthalate	490 UJ	1,500 UJ	370 UJ	1,000 UJ	480 UJ	1,000 UJ	370 UJ	1,000 UJ
Diphenyl amine	490 UJ	1,500 U	370 UJ	1,000 U	480 UJ	1,000 U	370 UJ	1,000 U
Fluoranthene	360 J	1,000 J	570	620 J	760	1,000 J	680	1,300 J
Fluorene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Hexachlorobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Hexachlorobutadiene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Hexachlorocyclopentadiene	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 UJ
Hexachloroethane	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Indeno(1,2,3-cd)pyrene	490 U	1,500 U	200 J	1,000 U	310 J	520 J	310 J	1,000 UJ
Isophorone	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Naphthalene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	550	1,000 U
Nitrobenzene	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
N-Nitrosodipropylamine	490 U	1,500 U	370 U	1,000 U	480 U	1,000 U	370 U	1,000 U
Pentachlorophenol	10,000 UJ	31,000 UJ	7,600 UJ	21,000 UJ	9,700 UJ	20,000 UJ	7,500 UJ	20,000 UJ
Phenanthrene	290 J	1,500 U	380	1,000 U	730	880 J	530	570 J
Phenol	2,500 U	7,900 U	1,900 U	5,200 U	2,500 U	5,200 U	1,900 U	5,200 U
Pyrene	540	1,400 J	730	610 J	1,300	1,600 J	1,300	1,600 J

Notes:

Bold = Detected Result

F13 = Fuel or Product Type: mixed or unknown

F5 = Product Type: Motor Oil

J = The reported result for this analyte should be considered an estimated value

mg/kg = milligrams per kilogram

PCBs = Polychlorinated biphenyls SVOC = semivolatile organic compounds

TPH = Total pertroleum hydrocarbons

U = This analyte was not detected, reporting limit shown μg/kg = micrograms per kilogram VOC = volatile organic compounds

APPENDIX C PHOTOGRAPHIC DOCUMENTATION



PHOTOGRAPH LOG

Project Name:

Bercovich Lead Smelter Removal Action

Site Location:

Oakland, Alameda County, California

TDD No.:

0002/1302-T2-R9-17-08-0002

Photo	Date:	
No.1	4/18/2018	
Direction I	Photo	K
Taken:		The second se
South		
Description:		
Overgrown residential yard prior to clearing		



Photo	Date:			
No. 2	4/18/2018			
Direction Photo				
Taken:				

East

Description:

Overgrown residential yard prior to clearing





PHOTOGRAPH LOG

Project Name:

Photo

Bercovich Lead Smelter Removal Action

Date:

Site Location:

Oakland, Alameda County, California

TDD No.:

0002/1302-T2-R9-17-08-0002

No. 3	4/23/2018	
Direction Photo Taken:		
South		
Descriptio	n:	
ERRS crew	U U	
tools to exca	vate against USCG	
	ind oversight	



PhotoDate:No. 45/8/2018Direction PhotoTaken:Southeast

Description:

ERRS crew using excavator in residential yard





Project Name:

PHOTOGRAPH LOG

TDD No.:

002

Bercovich L	ead Smelter I.	Removal Action	Oakland, Alameda County, California	0002/1302-T2-R9-17-08-00
Photo No. 5 Direction P Taken: Northeast Description ERRS crew of excavator in with an air monitoring/sa station nearb	n: using mini- a front yard ampling			
Photo	Date:			
No. 6	5/10/2018			
Direction P Taken:	Photo			
Southeast Description	n:			

Site Location:

Orange snow fence placed at bottom of excavation





PHOTOGRAPH LOG

Project Name:

Bercovich Lead Smelter Removal Action

Site Location:

Oakland, Alameda County, California

TDD No.:

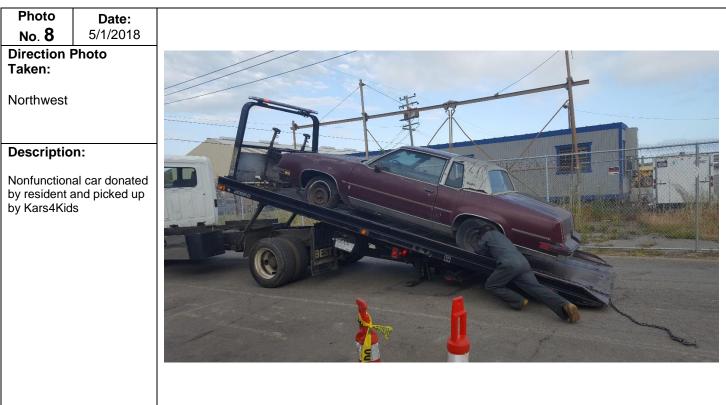
0002/1302-T2-R9-17-08-0002

Photo	Date:
No. 7	5/9/2018
Direction I Taken:	Photo
Southeast	

Description:

Excavator accesses backyard through fence







PHOTOGRAPH LOG

TDD No.:

Project Name:

Bercovich Lead Smelter Removal Action

Site Location:

Oakland, Alameda County, California

0002/1302-T2-R9-17-08-0002









Project Name:

PHOTOGRAPH LOG

TDD No.:

Bercovich Lead Smelter Removal Action

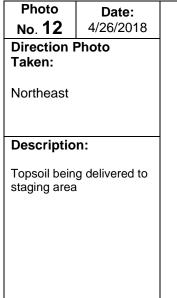
Oakland, Alameda County, California

Site Location:

0002/1302-T2-R9-17-08-0002

Photo	Date:	
No. 11	5/3/2018	
Direction Photo Taken:		
Southeast		
Description:		
Overview of staging area		Cle
		and the second se
		N.
		1







APPENDIX D DATA VALIDATION REPORTS AND LABORATORY ANALYTICAL REPORTS

BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018
Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA
Laboratory Job Number: 1804031
Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 4 soil samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameters and EPA methods:

- Volatile Organic Compounds (VOCs) by SW-846 Method 8260C
- Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270D
- Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO) by SW-846 Method 8015C
- TPH as Diesel Range Organics (DRO) and Oil Range Organics (ORO) by SW-846 Method 8015C
- Polychlorinated Biphenyls (PCBs) by SW-846 Method 8082A
- Resource Conservation and Recovery Act (RCRA) Metals by SW-846 Method 6010C/7473

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidance for Superfund Organic Methods Data Review" dated January 2017 and the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

VOCs by SW-846 METHOD 8260C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1804031-01	Soil	04/18/18	04/18/18	04/30/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/18/18	05/01/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/18/18	04/30/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/18/18	04/30/18

1. <u>Data Verification Check</u>

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the VOCs analysis, requested analytical data package items were received from the laboratory and the analyses requested were performed.

2. Holding Times

The samples were extracted and analyzed within the required holding time limit of 14 days.

3. <u>Blanks</u>

Two method blanks were analyzed with the VOC sample group and were free of target compound contamination above the detection limits, with the exception of bromomethane in the blank analyzed on 05/01/18; the analyte was detected at $1.6 \mu g/kg$ (below the quantitation limit). No qualification of data was required as bromomethane was not detected in the affected sample.

4. <u>Surrogate Results</u>

The following surrogate recovery results were outside the laboratory-established quality control (QC) limits.

- in sample R0-1-0.5: toluene-d₈ (117%), 4-bromofluorobenzene (79%), 1,2-dichlorobenzene-d₄ (57%)
- in sample R0-2-0.5: 1,2-dichloroethane-d4 (164%), toluene-d8 (123%),
 4-bromofluorobenzene (79%), 1,2-dichlorobenzene-d4 (56%)
- in sample R0-3-0.5: toluene-d₈ (119%), 4-bromofluorobenzene (77%), 1,2-dichlorobenzene-d₄ (62%)
- in sample R0-4-0.5: 1,2-dichlorobenzene-d₄ (64%)

Positive results for m&p-xylene in samples R0-1-0.5 and R0-3-0.5 were qualified as estimated due to high recoveries of the associated surrogate, toluene-d₈. No other analytes associated with surrogates with high recoveries were detected in samples R0-1-0.5, R0-2-0.5, or R0-3-0.5.

Nondetect results for the following compounds were qualified as estimated (UJ) in all samples due to low recoveries of the associated surrogates, 4-bromofluorobenzene and/or 1,2-dichlorobenzene-d4: 1,1,2-2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane (EDB), 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-hexanone, 4-methyl-2-pentanone (MIBK), bromoform, chlorobenzene, chlorodibromomethane, and tetrachloroethene.

5. <u>Laboratory Control Sample (LCS) Results</u>

Two LCSs were analyzed with the sample group and the recoveries were within laboratory-established QC limits, with the exception of the following analytes in the LCS analyzed on 05/01/18: vinyl chloride (122%); 1,1-dichloroethene (121%); and 1,1-dichloroethane (113%). No qualification of data was necessary as LCS recovery was high and the affected analytes were not detected in the associated sample.

6. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

Sample R0-2-0.5 was used for MS/MSD analyses. Several recoveries and relative percent differences (RPDs) were outside laboratory-established QC limits, as detailed in the table below.

Analyte	MS %Recovery	MSD %Recovery	RPD
Dichlorodifluoromethane	56	1	
Bromomethane	68	51	29
Trichlorofluoromethane	52	58	
1,1-Dichloroethene	51	54	
1,1,2-Trichloro-1,2,2-trifluoroethane	32	33	
Acetone	34	23	40
trans-1,2-Dichloroethene	41	38	
cis-1,2-Dichloroethene	56	54	
2-Butanone (MEK)	27	16	54
1,1,1-Trichloroethane	50	47	
Carbon tetrachloride	23	22	
1,1-Dichloropropene	47	45	
Trichloroethene	34	32	
1,2-Dichloropropane	54	52	
Bromodichloromethane	19	19	
cis-1,3-Dichloropropene	24	18	26
4-Methyl-2-pentanone (MIBK)	51	33	43
Toluene	63	61	
trans-1,3-Dichloropropene	37	30	21
Tetrachloroethene	33	29	
2-Hexanone	28	24	
Chlorodibromomethane	17	17	
1,2-Dibromoethane (EDB)	58	53	
Chlorobenzene	43	40	
Ethylbenzene	39	37	
m&p-Xylene	38	35	
o-Xylene	38	34	
Styrene	30	27	
Bromoform	6	8	35
1,1,2,2-Tetrachloroethane	32	31	
1,2,3-Trichloropropane	44	44	
1,3-Dichlorobenzene	15	13	

Analyte	MS %Recovery	MSD %Recovery	RPD
1,4-Dichlorobenzene	16	13	
1,2-Dichlorobenzene	15	13	
1,2-Dibromo-3-chloropropane	8	6	28

¹ Within QC limits.

The results for all analytes in the table above were qualified as estimated (J for detects and UJ for nondetects) in sample R0-2-0.5.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

C1, J: Indicates that the reported concentration for this analyte is below the quantitation limit and that the reported result should be considered an estimate. The data validator removed the "C1" qualifier and left the "J" qualifier in place.

C3, J, U: Indicates that the initial calibration for this analyte did not meet calibration criteria, that the reported result should be an estimate, and that the analyte was not detected. The data validator removed these qualifiers and added a "UJ" (estimated) qualifier.

Q1, J, U: Indicates that the internal standard associated with this analyte did not meet area count criteria. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q2: Indicates that the laboratory control standard associated with this sample did not meet recovery criteria for this analyte. The data validator removed these qualifiers.

Q3: Indicates that the quantitation limit standard did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q4: Indicates that the matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q6: Indicates that matrix spike/matrix spike duplicate precision criteria were not met for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q7: Indicates that surrogate spike recoveries for this sample were outside control limits. The data validator removed these qualifiers and, as appropriate, added "J" or "UJ" (estimated) qualifiers (see discussion above for surrogate spike recoveries).

N TIC, J: Indicates a Tentatively Identified Compound; this compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive. The data validator left these qualifiers in place.

The VOC data are acceptable for use based on the information received.

SVOCs by SW-846 METHOD 8270D

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1804031-01	Soil	04/18/18	04/23/18	05/07/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/23/18	05/07/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/23/18	05/07/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/23/18	05/07/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the SVOCs analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were extracted and analyzed within the required holding times of 14 days from sample collection to extraction and 40 days from extraction to analysis.

3. <u>Blanks</u>

A method blank was analyzed with the sample group and was free of target compound contamination above the detection limits.

4. <u>Surrogate Results</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. <u>LCS Results</u>

An LCS was analyzed with the sample group and all recoveries were within the laboratory-established QC limits, with the following exceptions: 2,4-dimethylphenol (21%); 4-nitroaniline (39%); 4,6-dinitro-2-methylphenol (125%); diphenyl amine (7%); carbazole (42%); 3,3'-dichlorobenzidine (0%), and di-n-octyl phthalate (67%). The nondetect results for 2,4-dimethylphenol, 4-nitroaniline, diphenyl amine, carbazole, 3,3'-dichlorobenzidine, and

di-n-octyl phthalate were qualified as estimated (UJ) in all samples. No qualification of data was necessary for 4,6-dinitro-2-methylphenol as the LCS recovery was high and the analyte was not detected in any samples.

6. <u>MS and MSD Results</u>

The laboratory reported that an MS/MSD sample pair was prepared but not analyzed because the samples were highly contaminated with heavy hydrocarbons which necessitated dilutions that would render the MS/MSD results meaningless.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

All samples were diluted (2x) due to heavy hydrocarbon contamination, which elevated the quantitation limits.

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

C1, J: Indicates that the reported concentration for this analyte is below the quantitation limit and that the reported result should be considered an estimate. The data validator removed the "C1" qualifier and left the "J" qualifier in place.

C3, J, U: Indicates that the initial calibration for this analyte did not meet calibration criteria, that the reported result should be an estimate, and that the analyte was not detected. The data validator removed these qualifiers and added a "UJ" (estimated) qualifier.

C4: Indicates that the calibration verification check did not meet % difference criteria for this analyte. The data validator removed these qualifiers as the affected analyte (3,3'-dichlorobenzidine) was already qualified due to poor LCS recovery.

Q1, J, U: Indicates that the internal standard associated with this analyte did not meet area count criteria. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q2, J, U: Indicates that the laboratory control standard associated with this sample did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q3: Indicates that the quantitation limit standard did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

N TIC, J: Indicates a Tentatively Identified Compound; this compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive. The data validator left these qualifiers in place.

The SVOCs data are acceptable for use as qualified based on the information received.

TPH AS GRO by SW-846 METHOD 8015C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1804031-01	Soil	04/18/18	04/18/18	04/24/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/18/18	04/24/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/18/18	04/24/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/18/18	04/24/18

1. <u>Data Verification Check</u>

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the TPH as GRO analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time of 14 days.

3. <u>Blanks</u>

A method blank was analyzed with the sample group and free of target compound contamination above the detection limit.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. <u>LCS Results</u>

An LCS was analyzed with the sample group and the recovery was within laboratory-established QC limits.

6. MS and MS Duplicate (MSD) Results

Sample R0-2-0.5 was used for MS and MSD analyses. Analyte recoveries and RPDs were within laboratory-established QC limits.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

All samples were diluted (50x), which elevated the quantitation limits.

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

F13: Indicates fuel or product type mixed or unknown. The data validator left these qualifiers in place.

The TPH as GRO data are acceptable for use as qualified based on the information received.

TPH AS DRO AND ORO by SW-846 METHOD 8015C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1804031-01	Soil	04/18/18	04/20/18	04/24/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/20/18	05/01/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/20/18	04/24/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/20/18	04/24/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the TPH as DRO and ORO analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. Holding Times

The samples were extracted and analyzed within the required holding time limits of 7 days from sample collection to extraction and 40 days from extraction to analysis.

3. <u>Blanks</u>

A method blank was analyzed with the samples and was free of target compound contamination above the quantitation limits.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits for sample R0-2-0.5. For samples R0-1-0.5, R0-3-0.5, and R0-4-0.5, the laboratory stated that samples contained heavy hydrocarbon mixtures outside the range of the analysis, and samples required dilution (5x) which diluted out the surrogates. Surrogate spike recoveries were not reported for these samples.

5. <u>LCS Results</u>

An LCS was analyzed with the sample group and the recovery was within laboratory-established QC limits.

6. <u>MS and MSD Results</u>

No MS/MSD analyses were conducted.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

As stated above, samples R0-1-0.5, R0-3-0.5, and R0-4-0.5 were diluted (5x) due to matrix, which elevated the quantitation limits.

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

F5: Indicates product type motor oil. The data validator left these qualifiers in place.

F13: Indicates fuel or product type mixed or unknown. The data validator left these qualifiers in place.

The TPH as DRO and ORO data are acceptable for use as qualified based on the information received.

PCBs by SW-846 METHOD 8082A

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1804031-01	Soil	04/18/18	04/27/18	05/04/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/27/18	05/04/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/27/18	05/04/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/27/18	05/04/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the PCBs analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were extracted and analyzed within the required holding times of 14 days from sample collection to extraction and 40 days from extraction to analysis.

3. <u>Blanks</u>

A method blank was analyzed with the sample group and was free of target compound contamination above the quantitation limits.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. <u>LCS Results</u>

An LCS was analyzed with the sample set. All recoveries were within laboratory-established QC limits.

6. <u>MS and MSD Results</u>

Sample R0-2-0.5 was used for MS and MSD analyses. All analyte recoveries and RPDs were within laboratory-established QC limits.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

C1, J: Indicates that the reported concentration for this analyte is below the quantitation limit and that the reported result should be considered an estimate. The data validator removed the "C1" qualifier and left the "J" qualifier in place.

G1, J: Indicates that the results from the two columns for this compound do not meet the dual column percent difference criteria for positive identification. The data validator removed the "G1" qualifier and left the "J" qualifier in place.

The PCBs data are acceptable for use as qualified based on the information received.

RCRA METALS by SW-846 METHOD 6010C/7473

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared		Date Prepared Date Analyz	
				Mercury Metals		Mercury	Metals
R0-1-0.5	1804031-01	Soil	04/18/18	04/26/18	04/23/18	04/26/18	05/01/18
R0-2-0.5	1804031-02	Soil	04/18/18	04/26/18	04/23/18	04/26/18	05/01/18
R0-3-0.5	1804031-03	Soil	04/18/18	04/26/18	04/23/18	04/26/18	05/01/18
R0-4-0.5	1804031-04	Soil	04/18/18	04/26/18	04/23/18	04/26/18	05/01/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the metals analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time limits: 28 days for mercury and 180 days for all other metals.

3. Blank Results

Method blanks were analyzed with the metal and mercury sample group and were free of target compound contamination above the quantitation limits.

4. <u>LCS Results</u>

LCSs (standard reference materials) were analyzed with the sample group and all recoveries were within QC limits, with the exception of barium (0%). The amount of barium in the laboratory control sample was below the quantitation limit for barium; therefore, no qualification of data was necessary.

5. <u>MS and MSD Results</u>

Sample R0-2-0.5 was used for MS and MSD analyses. All recoveries were within QC limits with the exception of lead (39 and 43%). All RPDs were within QC limits. The results for lead in sample R0-2-0.5 were qualified as estimated (J).

6. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

7. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

C1, J: Indicates that the reported concentration for this analyte is below the quantitation limit and that the reported result should be considered an estimate. The data validator removed the "C1" qualifier and left the "J" qualifier in place.

Q4, J: Indicates that the matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte. The data validator removed the "Q4" qualifier and left the "J" qualifier in place.

The metals data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY WITH QUALIFIERS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-01							S	oil - Sample	ed: 04/18/18 09:0
Sample ID: R0-1-0.5							Metals by	EPA 6000/7	000 Series Method
Aercury		0.39		0.16	mg/kg dry	B18D127	04/26/18	04/26/18	7473
rsenic		17		3		B18D103	04/23/18	05/01/18	6010C
larium		250		7.4		*			6010C
Cadmium		1.9		0.74			-	"	6010C
Chromium		76		1.5			7		6010C
lead		220		4.4					6010C
Selenium		ND	U	3			*		6010C
Silver		ND	U	1.5	Ħ	*	n		6010C
Sample ID: R0-1-0.5 'PH - Gasoline Range Organics		9.7	F13	8.2		B18D111	Pur; 04/18/18	cable Petro 04/24/18	leum Hydrocarbo 8015C
urrogate: a,a,a-Trifluorotoluen	2		86 %	76-124%		"	"	19	
ample ID: R0-1-0.5							Extra	ctable Petro	leum Hydrocarboi
PH - Diesel Range Organics		490	F13	37		B18D099	04/20/18	04/24/18	8015C
PH - Oil Range Organics		3,900	F5	150		н		=	8015C
ample ID: R0-1-0.5						Pol			EPA Method 8082
roclor 1016		ND	U	19	ug/kg dry	B18D129	04/27/18	05/04/18	8082A
roclor 1221		ND	U	40		*	π	**	8082A
roclor 1232		ND	U	19					8082A
roclor 1242		ND	U	19		79	*		8082A
roclor 1248		ND	U	19				17	8082A
roclor 1254		ND	U	19			π		8082A
troclor-1260		18	CI,CL J	19					8082A
roclor 1262			U	19	π				8082A
Aroclor 1268		ND	U	19	*				8082A
			55 %	20-140%		77		-	
Surrogate: Tetrachloro-m-xylene			45 %	20-125%			-		
Sample ID: R0-1-0.5	a de la gran d'anna a canada da da anna an an da da anna an	ND	υ	4.7		Volati B18D145	le Organic Cor 04/18/18	npounds by 04/30/18	EPA Method 8266 8260C
Dichlorodifluoromethane						-			8260C
Chloromethane			U	4.7 4.7					8260C
Vinyl chloride			U 13,1,4 4J	4.7			н		8260C
Bromomethane			U	4.7					8260C
Chloroethane			U	4.7				π	8260C
Trichlorofluoromethane							н		8260C
1,1-Dichloroethene			U	4.7					8260C
1,1,2-Trichloro-1,2,2-trifluoroet	hane		U	4.7					8260C
Acetone			64, J	37					8260C
Carbon disulfide	15	ND	CILU UN	4.7					02000
	4A	1	7/9/18	X	-	a com 100	4021.05	abusis ED	NAL 05 15 18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract Re	sult	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-01							S	oil - Sample	ed: 04/18/18 09:0
Sample ID:	R0-1-0.5					under der				EPA Method 82600
Dichlorometh			ND		4.7	ug/kg dry	B18D145	04/18/18	04/30/18	8260C
rans-1,2-Dich			ND		4.7					8260C
	hyl ether (MTBE)		ND		19				-	8260C
1,1-Dichloroe			ND	U	4.7			79		8260C
cis-1,2-Dichlo			ND	U	4.7			7		8260C
2-Butanone (N	MEK)		ND	U	37					8260C
Chloroform			ND	U	4.7					8260C
1,1,1-Trichlon	oethane		ND	U	4.7	-				8260C
Carbon tetrach	hloride		ND	U	4.7			7	17 51	8260C
1,1-Dichlorop	ropene		ND	U	4.7					8260C
Benzene			ND	J, Q7, U	4.7					8260C
1,2-Dichloroe	thane		ND	U	4.7	*	"		79	8260C
Trichloroether	ne		ND	U	4.7	57	*	π	34	8260C
1,2-Dichlorop	ropane		ND	U	4.7	n			н	8260C
Bromodichlor	romethane		ND	C3, J, U UC	4.7	"		*		8260C
is-1,3-Dichlo	propropene		ND	C3, J, U. UJ	4.7				n	8260C
4-Methyl-2-pe	entanone (MIBK)		ND	Q1, J, Q7, U	37			*	и	8260C
Toluene			ND	Q1, J, Q7, U	J 4.7	n			10	8260C
trans-1,3-Dich	aloropropene		ND	C3, J, U U.			*			8260C
1,1,2-Trichlon	oethane		ND	Q7, J, U	4.7	м	"			8260C
Tetrachloroeth	hene		ND	Q1, J, Q7, U	LT 4.7	"			'n	8260C
1,3-Dichlorop	oropane		ND	Q7, Q1, J, U	4.7	n	*			8260C
2-Hexanone			ND	Q7, Q1, LU U	LJ 37		"			8260C
Chlorodibrom	omethane		ND		4.7		"			8260C
	(22.2)		ND	J, U Q7, Q1, J, U L	4.7		π			8260C
1,2-Dibromoe			ND	Q1, Q7, J, U U			77			8260C
Chlorobenzen			ND	Q1, Q7, J, U	-					8260C
Ethylbenzene			5.4		9.4		π	-	"	8260C
m&p-Xylene				Q1, J, Q7, U				π		8260C
o-Xylene				1, Q1, Q7, U			-		19	8260C
Styrene				C3, Q1, Q7, U				-	91	8260C
Bromoform				J, U						8260C
1,1,2,2-Tetrac	chloroethane			Q7, Q1, J, U						8260C
1,2,3-Trichlon	ropropane		ND	Q7, Q1, J, U						8260C
1,3-Dichlorol	benzene		NE							8260C
1,4-Dichlorol	benzene		NE							8260C
1,2-Dichloro			NE							02000
		Fr.		7/9/1	0					
		THE	-	([1]]	•	Page	e 4 of 37 180	4031 9L_A	nalysis FI	NAL 05 15 18 12



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-01							S	oil - Sampl	ed: 04/18/18 09:05
Sample ID: R0-1-0.5		NÐ	Q7, C3, Q1, U	J 19	ug/kg dry	Volatil B18D145	e Organic Con 04/18/18	mpounds by 04/30/18	EPA Method 8260C 8260C
Ethanol		230	N TIC, J		"	**	**	31	8260C
Ethene. difluoro		10	N TIC, J		"	11	F 9	п	8260C
Propene, methyl		14	N TIC, J			п	69	"	8260C
Surrogate: 1,2-Dichloroethane-d4			111 %	63-144%		"	**	"	
Surrogate: Toluene-d8			117 %	86-111%		n	ęr	"	
Surrogate: 4-Bromofluorobenzene			79 %	81-110° i		"	27	"	
Surrogate: 1,2-Dichlorobenzene-d4			57 %	75-112%6		"		"	
Sample ID: R0-1-0.5									EPA Method 8270D
Phenol		ND	U	2,500	e1	B18D112	04/23/18	05/07/18	8270D
Bis(2-chloroethyl)ether		ND	U	490	"			"	8270D
2-Chlorophenol		ND	U	2,500	11	8	**	n	8270D
,3-Dichlorobenzene		ND	U	490		**	14	**	8270D
,4-Dichlorobenzene		ND	U	490	"	*	69	"	8270D
Benzyl alcohol		ND	U	2,500	"	"	19	"	8270D
,2-Dichlorobenzene		NĎ	U	490	"	"	**	"	8270D
2-Methylphenol		ND	U	2,500	п	*1	"	19	8270D
Bis(2-chloro-1-methylethyl) ether		ND	U	490		"	"	U	8270D
3&4-Methylphenol		ND	U	2,500		n	"	π	8270D
N-Nitrosodipropylamine		ND	U	490	n	"	-	"	8270D
Hexachloroethane		NĎ	U	490		17	**	"	8270D
Nitrobenzene		NĎ	U	490	19	"	"	13	8270D
Isophorone		ND	U	490		"	17	ન	8270D
2-Nitrophenol		ND	U	2,500	н	**	n	14	8270D
2,4-Dimethylphenol		NE	1, Q2, U U	J 2,500	**	"		99	8270D
Bis(2-chloroethoxy)methane		ND	U	490	97	н	**	25	8270D
2,4-Dichlorophenol		ND	U	2,500	"	**		**	8270D
1,2,4-Trichlorobenzene		ND	U	490	n	**	41	54	8270D
Naphthalene		NE	U	490	"	*	77	**	8270D
4-Chloroaniline		NE) U	2,500	**	22	19	"	8270D
) U	490	19	1.	e	"	8270D
Hexachlorobutadiene) U	2,500	"	11	*	**	8270D
4-Chloro-3-methylphenol) U	490		"	"	"	8270D
2-Methylnaphthalene) U	2,500	18	**	"	**	8270D
Hexachlorocyclopentadiene) U	2,500	19	н	*7	**	8270D
2,4,6-Trichlorophenol) U	2,500		"	n	"	8270D
2,4,5-Trichlorophenol		INI		, 1					

EAL 7/9/18



 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section SDG	18108E
Project Number: R18S51	75 Hawthorne Street Reported	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-01							S	oil - Sample	ed: 04/18/18 09:05
Sample ID: 2-Chloronaphth	R0-1-0.5 alene		ND	U	490	ug/kg dry	Semivolatile B18D112	Organic Co 04/23/18	mpounds by 05/07/18	EPA Method 8270D 8270D
2-Nitroaniline			ND	U	2,500		"	"	89	8270D
Dimethyl phthal	late		ND	υ	490	н	"	"	**	8270D
2,6-Dinitrotolue			ND	U	490		11	"	67	8270D
Acenaphthylene	•		ND	U	490	17	"	п	*	8270D
8-Nitroaniline			ND	U	2,500	**	"	er.	49	8270D
Acenaphthene			ND	T_1	490		"	н	92	8270D
2,4-Dinitrophen	ol		ND	C3, J, U UJ	10,000	*		"	89	8270D
4-Nitrophenol				U	2,500	~	"	"	10	8270D
Dibenzofuran			ND	U	490		22	**	75	8270D
2,4-Dinitrotolue	ne		ND	U	490	"	"	77	**	8270D
Diethyl phthalat				U	490	**	"	**	71	8270D
Fluorene				U	490	n	"	**	n	8270D
I-Chlorophenyl	nhenvl ether			U	490	"	"	н.		8270D
4-Nitroaniline	phonys curer		NP	1.02.11 UJ	2,500	**	11	17		8270D
4,6-Dinitro-2-m	athylphanol		NP	C3. J. W UD	2,500			8	19	8270D
			NP	1,02, 4 UJ	490	14	в	27		8270D
Diphenyl amine			ND		490	π	9 7	et.	"	8270D
4-Bromophenyl			ND		490	**	**	13	"	8270D
Hexachloroben			NP	C3, J, U . C	10,000	81	**	59	"	8270D
Pentachlorophe	nol		29	01, J	490	a	41	80	"	8270D
Phenanthrene			ND		490	11	н	н	"	8270D
Anthracene				1, Q2, + UJ	490	19	n			8270D
Carbazole			ND		490	"	**	17	11	8270D
Di-n-butyl phth	alate			N. J	490	39	#1	99	-	8270D
Fluoranthene			30(540		490	**	71	"	17	8270D
Pyrene			570		490			"	"	8270D
Butyl benzyl ph) U	490	"	*1	"	14	8270D
Benzo(a)anthra			NP	-C4, J, Q2, U U.	J 490	"	"	*	**	8270D
3,3'-Dichlorobe	nzidine		680		490	**	"	**	**	8270D
Chrysene	1. 1.4. 1.4.		8,000		490	n	"	**	19	8270D
Bis(2-ethylhex)				J, Q2, Q3, U U	J 490	"	n	81	21	8270D
Di-n-octyl phth			600		490	41	n	**	vr	8270D
Benzo(b)fluora			25		490	n		17	"	8270D
Benzo(k)fluora) ไป	490	27	"	59	"	8270D
Benzo(a)pyren			N	U U	490	"	*	"	17	8270D
Indeno(1,2,3-c				υU	490	"			67	8270D
Dibenz(a,h)an	thracene									

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18551	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-01							Se	oil - Sample	ed: 04/18/18 09:0
Sample ID: R0-1-0.5						Semivolatik	Organic Con	npounds by	EPA Method 8270
Benzo(g,h,i)perylene		340	Cr 1	490	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
Benzenedicarboxylic acid, diis		29,000	N TIC, J					"	8270D
lexadecanoic acid		2,300	N TIC, J		91		19	"	8270D
Octacosane		13,000	N TIC, J		Ħ			*	8270D
Surrogate: 2-Fhuorophenol			74 %	20-111%		79	-	#	
Surrogate: Phenol-d5			80 %	20-111%		n	n	"	
Surrogate: 2-Chlorophenol-d4			81 %	20-121%		*	"	"	
Surrogate: 1,2-Dichlorobenzene-	d4		67 %	20-136%		*	"	a	
Surrogate: Nitrobenzene-d5			78 %	20-125%		*	"	"	
Surrogate: 2-Fluorobiphenyl			72 %	20-121%			"	*	
Surrogate: 2,4,6-Tribromophenol			93 %	20-146%		"		N	
Surmante: Terphenyl-d14			75 %	20-131%		н	Ħ	77	
Sample ID: R0-1-0.5	Beneficial and the state of t	68		1	%	Conventional C B18D123	hemistry Para 04/25/18	04/26/18	PHA/EPA Methoo 3550C
Lab ID: 1804031-02	ander here a data is an also as a signify as applicate and the stand of the symp						S	oil - Sample	ed: 04/18/18 09:1
Sample ID: R0-2-0.5							Metals by	EPA 6000/7	7000 Series Method
Mercury		0.19	CLJ	0.20	mg/kg dry	B18D127	04/26/18	04/26/18	7473
Arsenic		11		2.2		B18D103	04/23/18	05/01/18	6010C
Barium		250		5.6	H	*	59	*	6010C
Cadmium		2.5		0.56	*		19		6010C
Chromium		55		1.1			н	=	6010C
Lead		250	J.04	3.3		*	n	H	6010C
Selenium		ND	U	2.2				"	6010C
Silver		ND	U	1.1		я	"		6010C
Sample ID: R0-2-0.5 TPH - Gasoline Range Organics		ND	U	9.9		B18D111	Pur 04/18/18	geable Petro 04/24/18	eleum Hydrocarbon 8015C
IFH - Odsorille Range organies									
Surrogate: a,a,a-Trifhuorotoluen	e		88 %	76-124%					
Sample ID: R0-2-0.5				22		B18D138	04/20/18	05/01/18	8015C
TPH - Diesel Range Organics	RE1	160		33		"		н	8015C
TPH - Oil Range Organics	RE1	1,900	F5	130					
Surroguie: Hexacosane	REI		26 %	20-111%					EFA Method 8082
Sample ID: R0-2-0.5			II	15	ug/kg dry		04/27/18	05/04/18	8082A
Aroclor 1016) U		n		11		8082A
Aroclor 1221			U	30					8082A
Aroclor 1232		NI	U	15					8082A
Aroclor 1242		NI	U	15					8082A
		NI	U	15					
Aroclor 1248		N	UU	15	*	н			8082A
Aroclor 1254				11					



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 94804

 Phone:(510) 412-2300
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				_
Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E	
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22	
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105			
Action				

Analyte	Reanalysis / Extract Resu		Qualifiers / Comments	-	intitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-02								S	oil - Sampl	ed: 04/18/18 09:15
Sample ID: R0-2-0.5 Aroclor-1260		19			15	ug/kg dry	Pol; B18D129	ychlorinated B 04/27/18	iphenyls by 05/04/18	EPA Method 8082A 8082A
Aroclor 1262	1	ND	U		15	**	"	"	*	8082A
Aroclor 1268	1	ND	U		15	"	"	16	**	8082A
Surrogate: Tetrachloro-m-xylene			62 %	20-1	40° a		11	*	п	
Surrogate: Decachlorobiphenyl			49 %	20-1	2500		11	17	"	
Sample ID: R0-2-0.5							Volati	e Organic Cor	npounds by	EPA Method 8260C
Dichlorodifluoromethane	Ν	ND	Q7, J, Q4, U	NI	2.8	8	B18D145	04/18/18	05/01/18	8260C
Chloromethane	Ν	ND	Q7, LU		2.8	"	51	94	-	8260C
Vinyl chloride	ľ	ND	J, Q7 U		2.8	"	87	19	**	8260C
Bromomethane	r.	ND	3, C3, Q7 ,	UJ	2.8	"	**	"	**	8260C
			Q4, Q6, U J, Q7, U		20	*		17	**	8260C
Chloroethane			J. 07.04.U	11	2.8	п		,		8260C
Trichlorofluoromethane		D			2.8		11	"		8260C
1,1-Dichloroethene		ND	Q7, J, Q4, U		2.8	"	и		=	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane	1	ND	Q7, Q4, J, U	w	2.8				15	8260C
Acetone		11	Q7, J, 61, Q6, Q4		22					8200C
Carbon disulfide	1	ND	4, €3, Q7 , L Q4, U	IJ	2.8	98	"	19	9	8260C
Dichloromethane	1	ND	Q7, LU		2.8			n	17	8260C
trans-1,2-Dichloroethene	1	ND	J ; Q7, Q4, U	as	2.8	"	13	29		8260C
tert-Butyl methyl ether (MTBE)	1	ND	5, Q7, U		11	n	11	**	п	8260C
1,1-Dichloroethane	1	ND	Q7, LU		2.8	49	69	"		8260C
cis-1,2-Dichloroethene	1	ND	Q7, J, Q4, U	w	2.8	33	19	"	**	8260C
2-Butanone (MEK)	1	ND	Q 7, J, Q4 , (17	22	"	"	**	n	8260C
Chloroform	1	ND	J, Q7 U		2.8	67	85	"	"	8260C
1,1,1-Trichloroethane	1	ND	Q7, Q4, J, U	us	2.8	99	**	84	н	8260C
Carbon tetrachloride	1	ND	J, Q7, Q4, U	w	2.8	**	19	н	11	8260C
1,1-Dichloropropene	1	ND	Q7, J, Q4, U	. u	2.8		17	**	**	8260C
	1	ND	Q7, LU		2.8	**	17	9	19	8260C
Benzene 1,2-Dichloroethane		ND	Q7, L U		2.8	**	tr.	**	**	8260C
			J, Q7, Q4, U	. UT	2.8	n	51	11	79	8260C
Trichloroethene			Q7, J, Q4, U		2.8	н	"	10	14	8260C
1,2-Dichloropropane			J , C3, Q 7, (2.8			**		8260C
Bromodichloromethane			Q4, U					"	"	8260C
cis-1,3-Dichloropropene			G 3, Q7, J , (Q 4, Q6, U		2.8		π	n	"	8260C
4-Methyl-2-pentanone (MIBK)		ND	J , Q1, Q7 , Q 4, Q6, U	us	2.2					

KA 2/9/18



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				And in case of
Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E	
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22	
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105			
Action				

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-02						s	oil - Sampl	ed: 04/18/18 09:15
Sample ID: R0-2-0.5					Volatile	Organic Co	mpounds by	EPA Method 8260C
Toluene	N	Q 1, J, Q7 , U	J 2.8	ug/kg dry	B18D145	04/18/18	05/01/18	8260C
rans-1,3-Dichloropropene	N	Q4, Q6, U	J 2.8	11	"	**	19	8260C
1,1,2-Trichloroethane	N	5, Q7, U	2.8	*1	87	*7	19	8260C
Fetrachkoroethene	N	Q1, J, Q7, UJ	2.8	"	**	u	*	8260C
1,3-Dichloropropane	N	Q1, J, Q7, U	J 2.8	**	п		"	8260C
2-Hexanone	Ν	Q1, J, Q7, U.	22	"	**	**	"	8260C
Chlorodibromomethane	N	0 07, J, Q1, U.	J 2.8	"		"	"	8260C
.2-Dibromoethane (EDB)	N	Q1, J, Q7, U.	2.8	R	85	"	58	8260C
Chlorobenzene	N	Q 7, J, Q1 , U.	2.8	76	53	н	"	8260C
Ethylbenzene	N	0 07. J. Q1 LO	2.8	"	**		**	8260C
n&p-Xylene	N	Q4,U	5.6	Ŧſ	11	"	"	8260C
o-Xylene	N	Q4,U	2.8	27	"	11	"	8260C
Styrene	N	Q1, J, Q7, U	2.8		"	a	и	8260C
Bromoform	N	Q7, J, Q1, U C3, Q4, Q6, U	J 2.8	**	м	"	"	8260C
1,1,2,2-Tetrachloroethane	N	0 J , QI, Q 7, U.	2.8	17	м	н	"	8260C
1,2,3-Trichloropropane	N	0 J ; Q1, Q7 , UC Q4, U	2.8	"	"	84	"	8260C
1,3-Dichlorobenzene	N	0 Q1, J, Q7, U.J Q4, U	2.8		n	41	"	8260C
1,4-Dichlorobenzene	N	0 (1, J, Q7, U.	2.8	88	"	20	**	8260C
1,2-Dichlorobenzene	N	0 Q1, Q7, J, UC	2.8	"		e#		8260C
1,2-Dibromo-3-chloropropane	N	13 HOL C2	a "	**	"	**		8260C
Ethanol	:	TIC, J		"		79		8260C
Surrogate: 1,2-Dichloroethane-d4		164 %	63-144%		"	72	**	
Surrogate: Toluene-d8		123 %	86-111%		"		0	
Surrogate: 4-Bromofluorobenzene		79 %	81-110%				77	
Surrogate: 1,2-Dichlorobenzene-d4		56 %	75-112%					
Sample ID: R0-2-0.5						e Organic Co	ompounds by 05/07/18	EPA Method 8270
Phenol	٨	D U	1,900	"	B18D112	04/23/18	05/07/18	
Bis(2-chloroethyl)ether	1	ID U	370		**	**		8270D
2-Chlorophenol		ID U	.1.900		11		p.	8270D

FAL 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

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Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract Res	ult	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-02							S	oil - Sample	ed: 04/18/18 09:15
Sample ID: 1,3-Dichlorobe	R0-2-0.5		ND	U	370	ug/kg dry	Semivolatile B18D112	Organic Cor 04/23/18	npounds by 05/07/18	EPA Method 8270D 8270D
1,4-Dichlorobe	nzene		ND	U	370	24	н	18	14	8270D
Benzyl alcohol			ND	U	1,900	**	"	59	77	8270D
1,2-Dichlorobe	nzene		ND	U	370		"	14	17	8270D
2-Methylpheno	l		ND	U	1,900	89	"	**	п	8270D
Bis(2-chloro-1-	methylethyl) ether		ND	U	370	89	"	11	π	8270D
3&4-Methylph	enol		ND	U	1,900	25	"	54	**	8270D
N-Nitrosodipro	pylamine		ND	U	370	*	"	54	**	8270D
Hexachloroetha	ane		ND	U	370	н	"	54	*	8270D
Nitrobenzene			ND	U	370	79	п	99	*1	8270D
lsophorone			ND	U	370	69	"	**	**	8270D
2-Nitrophenol			ND	U	1,900	**	"	39	53	8270D
2,4-Dimethylpl	henol		NE	7, Q2, U UJ	1,900	14	"	38	"	8270D
Bis(2-chloroeth	noxy)methane		ND	U	370	te	"	58	21	8270D
2,4-Dichloroph			ND	U	1,900	er	"	94	**	8270D
1,2,4-Trichloro			ND	U	370	es.	n	75	17	8270D
Naphthalene			ND	U	370	41	59	5 4	97	8270D
4-Chloroaniline	e		ND	U	1,900	43	13	**	*1	8270D
Hexachlorobut			ND	U	370	19		**	19	8270D
4-Chloro-3-me			ND	U	1,900	12	13	**	29	8270D
2-Methylnapht			ND	U	370	"		"		8270D
Hexachlorocyc			ND	U	1,900	"	м	"	в	8270D
2,4,6-Trichloro			ND	U	1,900	"	17	"	п	8270D
2,4,5-Trichloro			ND	U	1,900	"	**	"	*	8270D
			NE	U	370	"	17	"	"	8270D
2-Chloronapht			ND) U	1,900	"	**		н	8270D
2-Nitroaniline			NE) U	370	"		41	u	8270D
Dimethyl phtha			NE) U	370	11	"		"	8270D
2,6-Dinitrotolu			NE) U	370	**	п	13	19	8270D
Acenaphthyler) U	1,900		"	*	**	8270D
3-Nitroaniline) U	370	79		11	84	8270D
Acenaphthene				U, C3, J UJ		n	17	"	25	8270D
2,4-Dinitrophe) U	1,900	п	"	"	"	8270D
4-Nitrophenol				ງ U	370	**	"	"	"	8270D
Dibenzofuran) U	370	**		"	"	8270D
2,4-Dinitrotol	uene			D U	370	**		**	"	8270D
Diethyl phtha	late		IN.							

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Апајуtе	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-02						S	oil - Sampl	ed: 04/18/18 09:15
Sample ID: R0-2-0.5 Fluorene	ND	U	370	ug/kg dry	Semivolatile B18D112	Organic Co 04/23/18	mpounds by 05/07/18	EPA Method 8270D 8270D
4-Chlorophenyl phenyl ether	ND	U	370	**	"	**	19	8270D
4-Nitroaniline	ND	7, Q2, U UJ	1,900	"	11	79	**	8270D
4,6-Dinitro-2-methylphenol	ND	C3. J.U UJ	1,900	н	"	e		8270D
Diphenyl amine	ND	J.02. U UJ			н	18	"	8270D
I-Bromophenyl phenyl ether	ND		370	n	u	n		8270D
Hexachlorobenzene	ND		370	"	U	٩r	"	8270D
Pentachlorophenol	ND	-		n	"	*1	II.	8270D
Phenanthrene	380	0,00,00	370	89	и		"	8270D
Anthracene	ND	U	370	п	n	"	п	8270D
Carbazole	ND	J, Q2, UL UJ		я	a	11	14	8270D
Di-n-butyl phthalate	ND		370	77	"	17	17	8270D
Fluoranthene		0	370	13	"	"	19	
Pyrene	570		370			0	14	8270D 8270D
Butyl benzyl phthalate	730 2,600		370	43	**		**	8270D 8270D
Benzo(a)anthracene	2,000	CL J	370	61	17	н	**	8270D
3.3'-Dichlorobenzidine	ND			**	н	"	"	8270D
Chrysene	800		370		"	"	19	8270D
Bis(2-ethylhexyl) phthalate	1,800		370	*1	n		**	8270D
Di-n-octyl phthalate	ND	J. Q2, Q3, U CA		**	n	"	"	8270D
Benzo(b)fluoranthene	940		370	17	41	n	**	8270D
Benzo(k)fluoranthene	240	CL J	370	0	"	n	**	8270D
Benzo(a)pyrene	310		370	n	*	"	17	8270D
indeno(1,2,3-cd)pyrene	200		370	"	n	"	**	8270D
Dibenz(a,h)anthracene	ND		370	"	"	**	11	8270D
Benzo(g,h,i)perylene	420		370		"	*	17	8270D
Hentriacontane	12,000	n tic, j		31	п	"	**	8270D
lexadecanoic acid	4,500	N TIC, J			π	"		8270D
Sitosterol	7,300	N TIC, J		"	14	n	11	8270D
Surrogate: 2-Fluorophenol		84 %	20-111%		~	"	11	
Surrogate: Phenol-d5		88 %	20-111%		"	¥7	"	
Surrogate: 2-Chlorophenol-d4		88 %	20-121%		"	π	н	
Surrogate: 1,2-Dichlorobenzene-d4		73 %	20-136%		n	"	77	
Surrogate: Nitrobenzene-d5		81 %	20-125%		"	n	"	
Surrogate: 2-Fluorobiphenyl		78 %	20-121%		н	"	**	
Surrogate: 2,4,6-Tribromophenol		101 %	20-146%		11	n	11	
Surrogate: Terphenyl-d14		95 %	20-131%		"	"	n	

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Project N	Action	ns Smelter April 2018 Ren	noval		Emergency Re: 75 Hawtho San Francisc	rne Street			storG: 181 rted: 05/	08E 15/18 12:22
Sample R	esults									
Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-02							Se	oil - Sampl	ed: 04/18/18 09:1
Sample ID: % Solids	R0-2-0.5		90)	1	%	Conventional O B18D123	Chemistry Para 04/25/18	04/26/18	APHA/EPA Method 3550C
Lab ID:	1804031-03							Se	oil - Sampl	ed: 04/18/18 09:3
Sample ID:	R0-3-0.5				0.022		0100107			7000 Series Method
Mercury		RE1	0.40		0.032	mg/kg dry	B18D127 B18D103	04/26/18 04/23/18	04/26/18	6010C
Arsenic			15		7.2	14	B16D103	04/23/10 #	W	6010C
Barium			220		0.72					6010C
Cadmium			3.2		1.4				-	6010C
Chromium			58		4.3	91	-			6010C
ead			340			*				6010C
Selenium				U	2.9					
Silver			NE) U	1.4					6010C
ample ID: PH - Gasoline	R0-3-0.5 Range Organics		ND	U	6.8		B18D111	Pury 04/18/18	geable Petro 04/24/18	leum Hydrocarbon 8015C
Surrogate: a,a,i	-Trifluorotoluene			87 %	76-124%			-		
Sample ID: TPH - Diesel R	R0-3-0.5		98	F13	36		B18D099	Extra 04/20/18	etable Petro 04/24/18	leum Hydrocarbon 8015C
TPH - Oil Rang) F5	140	-	*			8015C
	terrap to an abigtor which the second state and an appendix	alumanda a Maridoa fada - Yan daar an di daa Mila ay adaa daa digaa ay					Dal	wahlowingtod B	inhonvie hu	EPA Method 8082
Aroclor 1016	R0-3-0.5		NE	U	19	ug/kg dry	B18D129	04/27/18	05/04/18	8082A
				U	39				-	8082A
Aroclor 1221					19		π			8082A
troclor 1232			NE							8082A
Aroclor 1242			NE		19			п	77	8082A
Aroclor 1248) U	19					8082A
Aroclor 1254			NE	U	19					
Aroclor-1260			15	Gr 1	19	*			*	8082A
Aroclor 1262			NE	U	19					8082A
Aroclor 1268			NE	U	. 19		н			8082A
Surrogate: Tetr	achloro-m-xylene			46 %	20-140%			"	*	
	achiorobiphanyi			36 %	20-125%		bs	#		
Sample ID: Dichlorodifluor	R0-3-0.5		NI) U	4		Volati B18D145	ile Organic Con 04/18/18	mpounds by 04/30/18	EPA Method 8260 8260C
				U	4	-				8260C
Chloromethane				υ				*		8260C
Vinyl chloride				_	T			-		8260C
Bromomethane				- C3, J, U U	4				-	8260C
Chloroethane			N	DU	4					8260C
Trichlorofluor	omethane		N	DU	4					
1,1-Dichloroet	hene		N	DU	4	*				8260C
			1.	11						

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Page 12 of 37 1804031 9L_Analysis FINAL 05 15 18 1222



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract Resul	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-03						S	oil - Sample	ed: 04/18/18 09:30
Sample ID: R0-3-0.5 1,1,2-Trichloro-1,2,2-trifluoroethane	N	DU	4	ug/kg dry	Volatile B18D145	e Organic Con 04/18/18	mpounds by 04/30/18	EPA Method 8260C 8260C
Acetone	9	0	32		=			8260C
Carbon disulfide	N	D 0,1,0 U	5 4			-		8260C
Dichloromethane	N	DU	4			-	=	8260C
trans-1,2-Dichloroethene	N	DU	4	*	π	*		8260C
tert-Butyl methyl ether (MTBE)	N	DU	16			-	*	8260C
1,1-Dichloroethane	N	DU	4		19		n	8260C
cis-1,2-Dichloroethene	N	DU	4	n				8260C
2-Butanone (MEK)		57	32		Ħ	н		8260C
Chloroform	N	DU	4			79	-	8260C
1,1,1-Trichloroethane	N	DU	4			99	=	8260C
Carbon tetrachloride	N	DU	4				*	8260C
1,1-Dichloropropene	N	DU	4		*	=	=	8260C
Benzene	N	D 7,97 U	4				n	8260C
1,2-Dichloroethane	Ν	DU	4		m	н		8260C
Trichloroethene	N	DU	4		я			8260C
1,2-Dichloropropane	N	DU	4					8260C
Bromodichloromethane	N	D C3, J, U	5 4	*	n			8260C
cis-1,3-Dichloropropene	N	D J, CJ, W J,	4					8260C
4-Methyl-2-pentanone (MIBK)	N	D Q 1, J, Q7, U	32		7	29		8260C
Toluene		D Q1, U, L Q7						8260C
trans-1,3-Dichloropropene		D J, C3, U	_			-		8260C
1,1,2-Trichloroethane	h	D +1,1,07 UJ				"		8260C
		D U, Q1, J, Q7						8260C
Tetrachloroethene		D Q1, J, Q7, LI						8260C
1,3-Dichloropropane		D Q1, J, Q7, U L						8260C
2-Hexanone		D Q 1, J, C3 , U			17			8260C
Chlorodibromomethane	1	Q7, U						8260C
1,2-Dibromoethane (EDB)	ľ	D 1, 01, 07, U	4	-				
Chlorobenzene		ID U; Q1, J, Q7		W			7	8260C
Ethylbenzene		ID J, Q1, Q7, U					-	8260C
m&p-Xylene		1.3 J, CI, QL, Q7						8260C 8260C
o-Xylene	1	ID J, Q1, Q7, U				-		
Styrene	1	ID U, Q1, J, Q7	-					8260C
Bromoform	1	ND Q1, J, C3, U	IJ 4					8260C
1100 Treadlengthree		Q7,U VD 1,Q7,Q1, U	4		n	*		8260C
1,1,2,2-Tetrachloroethane		ND J, QI, Q7, U	-	ж				8260C
1,2,3-Trichloropropane		1. 1, X1, X1, 0						

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 181082
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 180	4031-03							S	oil - Sampl	ed: 04/18/18 09:30
Sample 1D: R0-	3-0.5			Q1, J, Q7, U	ut i	ug/kg dry	Volatil B18D145	e Organic Con 04/18/18	npounds by 04/30/18	EPA Method 8260C 8260C
			ND			и <u>р</u> /к <u>р</u> ш у "	"	"	"	8260C
1,4-Dichlorobenzene			ND	Q1, J, Q7, U			C#	88	**	8260C
1,2-Dichlorobenzene			ND	J; Q1, Q7, U			17	19	57	8260C
1,2-Dibromo-3-chlorop	propane		ND	J, Q1, C3, Q7, U	16					0200C
Ethanol			510	NTIC, J		"	"	PE	84	8260C
lsopropyl Alcohol			82	N TIC, J		n	89	77	66	8260C
Octanone			300			et.	19	*	11	8260C
Octene			52			"	"	**	11	8260C
Propene, methyl			8.4	N TIC, J						8260C
Surrogate: 1,2-Dichlor	roethane-d4			108 %	63-144%		87	**	"	
Surrogate: Toluene-d8				119 %	86-111° a		**	79	"	
Surrogate: 4-Bromoflu	orobenzene			77 %	81-110%		"	78	"	
Surrogate: 1,2-Dichloi	robenzene-d4			62 %	75-112%		"	/5	<i>n</i>	
Sample ID: R0-	3-0.5									EPA Method 8270E
Pheno!			ND	U	2,500	58	B18D112	04/23/18	05/07/18	8270D
Bis(2-chloroethyl)ethe	T		ND	U	480	п	11	"	89 8	8270D
2-Chlorophenol			ND	U	2,500		"	18	"	8270D
1,3-Dichlorobenzene			ND	U	480	e7	"	17	п	8270D
1,4-Dichlorobenzene			ND	U	480	19	19	17	n	8270D
Benzyl alcohol			ND	U	2,500	"	"	**		8270D
1,2-Dichlorobenzene			ND	U	480	"	n	н	"	8270D
2-Methylphenol			ND	U	2,500	15	"	41	61	8270D
Bis(2-chloro-1-methyl	ethyl) ether		ND	U	480	"		н	"	8270D
3&4-Methylphenol			ND	U	2,500	"	*	"	"	8270D
N-Nitrosodipropylami	ne		ND	U	480		**	n		8270D
Hexachloroethane			ND	U	480	"	20	0	41	8270D
Nitrobenzene				U	480		17	**	**	8270D
				U	480	"	54		*1	8270D
Isophorone				. บ	2,500		19		19	8270D
2-Nitrophenol				1	2,500		n	**	58	8270D
2.4-Dimethylphenol	4				480		"	64	**	8270D
Bis(2-chloroethoxy)m	emane					**		17		8270D
2,4-Dichlorophenol) U	2,500	23		51	19	8270D
1,2,4-Trichlorobenzer	е) U	480	15				8270D
Naphthalene) U	480	57	"	"		8270D
4-Chloroaniline) U	2,500		n			
Hexachlorobutadiene			NE) U	480		"			8270D
4-Chloro-3-methylph	enol		NE) U	2,500		n	17		8270D

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

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Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E	
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22	
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105			
Action				

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Anałyzed	Method
Lab 1D:	1804031-03							s	oil - Sample	ed: 04/18/18 09:30
Sample ID: 2-Methylnapht]	R0-3-0.5 halene		ND	U	480	ug/kg dry	Semivolatile B18D112	Organic Cor 04/23/18	mpounds by 05/07/18	EPA Method 8270D 8270D
Hexachlorocyc	lopentadiene		ND	U	2,500	17	rt	71	37	8270D
2,4.6-Trichloro	phenol		ND	ប	2,500		π	"	79	8270D
2,4,5-Trichloro	phenol		ND	U	2,500	11	25	"	"	8270D
2-Chloronaphth	halene		ND	U	480	"	м	"	л	8270D
-Nitroaniline			ND	U	2,500	"	59	19	13	8270D
Dimethyl phtha	alate		ND	U	480	п	"	n	р	8270D
2,6-Dinitrotolu	ene		ND	U	480	"	*	17	78	8270D
Acenaphthylen	e		ND	U	480	π	п	17	19	8270D
-Nitroaniline			ND	U	2,500		17	"	24	8270D
Acenaphthene			ND	υ	480		38	м	51	8270D
2.4-Dinitropher	nol		ND	U, 63, 1 UJ	9,700	"	rt	"	27	8270D
-Nitrophenol			ND	υ	2,500	"	π	"	11	8270D
Dibenzofuran			ND	U	480	"	"	"	**	8270D
.,4-Dinitrotolu	ene		ND	υ	480	17	"	"	"	8270D
, Diethyl phthala			ND	U	480	n	11	"	**	8270D
luorene			ND	U	480	"	"	Ħ	14	8270D
] phenyl ether		ND	U	480		п	"	"	8270D
-Nitroaniline			ND	U, J, Q2 UJ	2,500	н	-	17	7	8270D
l,6-Dinitro-2-n	nethylphenol		N	U, CS, LUJ	2,500		17	11	19	8270D
Diphenyl amin			ND	U, J, Q2 UJ	480	**	"	п	17	8270D
4-Bromopheny			ND		480	99	"	"	17	8270D
1exachloroben			ND		480	58	н	10	"	8270D
				U, C3, L UJ	9,700	44	"	*7	"	8270D
Pentachlorophe	eno		730		480	*	**	ŧ	**	8270D
Phenanthrene Anthracene				U	480		"	**	**	8270D
Carbazole			NP	U. J. Q2 LOJ	480	*	54	**		8270D
Di-n-butyl pht	halate		ND		480	"	74	17		8270D
Fluoranthene	halate		760		480	11	17	n	98	8270D
Pyrene			1,300		480	88	17	74	12	8270D
Butyl benzyl p	ohthalate		54/		480	14	88	17	54	8270D
Benzo(a)anthr			46	CN J	480	27	н	в	14	8270D
3,3'-Dichlorob			N	1, C4, J, Q2 U	J 480	"	n	n	**	8270D
Chrysene			1,200)	480		n	"	"	8270D
Bis(2-ethylhex	xyl) phthalate		2,704		480	"	"		и 17	8270D
Di-n-octyl pht	thalate		Ю	U, J, Q2, Q3 U					**	8270D
Benzo(b)fluor	anthene		1,70)	480	11	"	"	'n	8270D



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Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte		Reanalysis / Extract Res		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 18	04031-03							S	oil - Sampl	ed: 04/18/18 09:30
Sample ID: R(Benzo(k)fluoranthen	9-3-0.5 e		450	C1, J	480	ug/kg dry	Semivolatile B18D112	Organic Con 04/23/18	npounds by 05/07/18	EPA Method 8270D 8270D
Benzo(a)pyrene			570		480	"	**	н	н	8270D
ndeno(1,2,3-cd)pyre	ene			CL J	480	**	**	99	57	8270D
Dibenz(a,h)anthracen	ıe		ND	υ	480	"	"	**	м	8270D
Benzo(g,h,i)perylene	,		500		480	"	"	*		8270D
Surrogate: 2-Fluorop	ohenol			59 %	20-111%		**	11	"	
Surrogate: Phenol-d3	5			22 %	20-111%		"	**	11	
urrogate: 2-Chlorop	phenol-d4			90 %	20-121%		~	**	"	
urrogate: 1,2-Dichle	orobenzene-d4			78 %	20-136%		**	11	*7	
urrogate: Nitrohenz	ene-d5			82 %	20-125%		n	"	n	
Surrogate: 2-Fluorob	biphenyl			75 %	20-121%		"	"	**	
Surrogate: 2,4,6-Trib	promophenol			99 %	20-146%		77	19	**	
urrogate: Terphenyl	-d14			85 %	20-131%		H	**	**	
ample ID: R0 6 Solids)-3-0.5		70		1	º/o	Conventional Ch B18D123	emistry Para 04/25/18	meters by A 04/26/18	PHA/EPA Methods 3550C
·	04031-04					·		S	oil - Sampl	ed: 04/18/18 10:3
ample ID: RO	-4-0.5							Metals by	EPA 6000/7	7000 Series Method:
lercury			0.22		0.13	mg/kg dry	B18D127	04/26/18	04/26/18	7473
rsenic			11		2.2	P2	B18D103	04/23/18	05/01/18	6010C
Barium			160		5.5	н	18	19		6010C
admium			1.4		0.55	o	**		"	6010C
Chromium			56		1.1			"	**	6010C
ead			660		3.3	19		"		6010C
elenium			ND	U	2.2	14	34			6010C
ilver			ND	U	1.1	T	*	11	"	6010C
Sample ID: RO)-4-0.5 ge Organics		ND	U	5.2	ę.	B18D111	Pur 04/18/18	geable Petro 04/24/18	leum Hydrocarbon: 8015C
Surrogate: a,a,a-Trifi	luorotoluene			86 %	76-124%		н	27	"	
)-4-0.5							Extra	ctable Petro	leum Hydrocarbon
PH - Diesel Range			110	F13	27	n	B18D099	04/20/18	04/24/18	8015C
[PH - Oil Range Org		1	,100	F5	110	**	11	11	"	8015C
ample ID: R)-4-0.5					ug/kg dry	Polyc B18D129	hiorinated E 04/27/18	iphenyls by 05/04/18	EPA Method 8082A 8082A
Aroclor 1016			ND		14	n n	11	11	n	8082A
Aroclor 1221			ND		30			,,	"	8082A
Aroclor 1232			ND	U	14					
Aroclor 1242			ND	U	14	"	"			8082A
Aroclor 1248			ND	U	14	41	**	40	"	8082A
									**	8082A

KAL 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal Action	San Francisco CA, 94105		

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-04							Se	oil - Sampl	ed: 04/18/18 10:30
Sample ID: Aroclor 1260	R0-4-0.5		24		14	ug/kg dry	Pot B18D129	ychlorinated B 04/27/18	Siphenyls by 05/04/18	EPA Method 8082A 8082A
Aroclor 1262			ND	U	14					8082A
Aroclor 1268			ND	U	14	×	*			8082A
Surrogate: Tetr	achloro-m-xylene			50 %	20-140%		"		"	
Surrogate: Dec	achlorobiphenyl			40 %	20-125%		W	M		
Sample ID: Dichlorodifluor	R0-4-0.5		ND	U	2.9	н	Volati B18D145	le Organic Con 04/18/18	npounds by 04/30/18	EPA Method 8260C 8260C
Chloromethane				U	2.9	91			H	8260C
Vinyl chloride			ND		2.9		н			8260C
Bromomethane			ND	Tern MJ	-					8260C
Chloroethane			ND		2.9					8260C
Trichlorofluoro	methane		ND		2.9	11			**	8260C
1,1-Dichloroeth				U	2.9	11			*	8260C
	-1,2,2-trifluoroethane		ND		2.9	-		и	19	8260C
Acetone			ND		23					8260C
Carbon disulfid	le		ND							8260C
Dichlorometha			ND	U	2.9					8260C
trans-1,2-Dichl			ND		2.9			π		8260C
	yl ether (MTBE)		ND		12					8260C
1,1-Dichloroeth			ND		2.9	H	R			8260C
cis-1,2-Dichlor			ND		2.9	17		77		8260C
2-Butanone (M				U	23					8260C
Chloroform				υ	2.9	π				8260C
1,1,1-Trichloro	ethane		ND		2.9					8260C
Carbon tetrachl			ND		2.9					8260C
1,1-Dichloropro			ND		2.9					8260C
Benzene	-Pane			U	2.9					8260C
1,2-Dichloroeth	ane			U	2.9					8260C
Trichloroethene			ND		2.9					8260C
1,2-Dichloropro			ND		2.9	-				8260C
Bromodichloro				U, J, C1 UT					19	8260C
cis-1,3-Dichlor				7,63,11 UJ		19		я		8260C
	ntanone (MIBK)			U	2.9					8260C
Toluene	manual (manual)			U	2.9				-	8260C
trans-1,3-Dichl	omnronene			Testu						8260C
				U						8260C
1,1,2-Trichloro	cualic		ND	0	2.9					02000

EAL 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
					So	oil - Sample	ed: 04/18/18 10:30
NI) U	2.9	ug/kg đry	Volatil B18D145	Organic Con 04/18/18	npounds by 04/30/18	
NE	U	2.9	"	79	28	**	8260C
NE	U	23	"	н	**	*7	8260C
NI	7, C3, U UJ	2.9	"	"	"	"	8260C
NE) U	2.9	n		**	**	8260C
NI	0 05	2.9		52	17	"	8260C
N) U	2.9	"	24	*	*1	8260C
4.6	61, 1	5.8	и	51	19	11	8260C
NE) U	2.9			19	**	8260C
NI) <u>(</u>]	2.9	17		7	n	8260C
NE	J, C3, U UJ	2.9		**	п	"	8260C
NI) U	2.9	17	**	**	11	8260C
NE	U	2.9	р	tr	"	69	8260C
N	UJ	2.9	н	1 2	"	*7	8260C
N	υJ	2.9	**	**	"	**	8260C
CM	υJ	2.9	87	12	17		8260C
СИ	-c3, J, U UJ	12	12	es	п	ч	8260C
150) N TIC, J		**	19		29	8260C
	105 %	63-144°;		71	"	π	
	111 %	86-111%		"	n	27	
	83 %	81-110%		e7	"	17	
	64 %	75-112%		"	"	"	
		1 000				npounds by 05/07/18	EPA Method 8270D 8270D
			и	"	11	17	8270D
				IT		20	8270D
				"		54	8270D
N				**	**	**	8270D
NI				"	17	,,	8270D
						**	8270D
N) U	370			13		
N	D U	1,900					8270D
N	D U	370	n	0			8270D
N	DU	1,900	11	n			8270D
N	DU	370	**	*			8270D
N	DU	370	ΨE	**	н		8270D
N	DU	370	41	**	*1		8270D
						45	8270D
	Extract Result NE	Extract Result Comments ND U 44 St ND U ND U	Result Comments Limit ND U 2.9 ND U 2.9 ND U 2.3 ND T.63, U V 2.9 ND U 2.9 ND C5, J, U C 12 150 NTIC, J 12 150 NTC, J 12 150 NTC, J 370 ND <td< td=""><td>Result Comments Limit Units ND U 2.9 ug/kg dry ND U 2.9 " ND U 3.9 8 ND U 1.05 63-144% 111 % 86-111% * 83 % 81-110%</td><td>Result Connection Limit Units Batch ND U 2.9 ug/kg dry B18D145 ND U 2.9 " " ND T.S.J 2.9 " " ND U 1.05 % 63-144% " 110 % 86-111% "</td><td>Result Comments Limit Units Batch Prepared ND U 2.9 ug/kg dry BIRD 145 0418/18 ND U 2.9 " " " ND U 2.9 " " " " " ND U 2.9 " " "</td><td>Result Comments Limit Units Bate Prepared Analyzed Stract Comments Limit Units Bate Prepared Analyzed Stract Comments U 2.9 ug/kg dry BitBD145 04/18/18 04/20/18 ND U 2.9 C C - - ND U 2.9 C C - - ND U 2.9 C C - - - ND U 2.9 C C -</td></td<>	Result Comments Limit Units ND U 2.9 ug/kg dry ND U 2.9 " ND U 3.9 8 ND U 1.05 63-144% 111 % 86-111% * 83 % 81-110%	Result Connection Limit Units Batch ND U 2.9 ug/kg dry B18D145 ND U 2.9 " " ND T.S.J 2.9 " " ND U 1.05 % 63-144% " 110 % 86-111% "	Result Comments Limit Units Batch Prepared ND U 2.9 ug/kg dry BIRD 145 0418/18 ND U 2.9 " " " ND U 2.9 " " " " " ND U 2.9 " " "	Result Comments Limit Units Bate Prepared Analyzed Stract Comments Limit Units Bate Prepared Analyzed Stract Comments U 2.9 ug/kg dry BitBD145 04/18/18 04/20/18 ND U 2.9 C C - - ND U 2.9 C C - - ND U 2.9 C C - - - ND U 2.9 C C -



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E	
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22	
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: I	804031-04							S	oil - Sampl	ed: 04/18/18 10:30
Sample ID: R 2-Nitrophenol	0-4-0.5		ND	U	1,900	ug/kg dry	Semivolatik B18D112	Organic Cor 04/23/18	npounds by 05/07/18	EPA Method 8270D 8270D
2,4-Dimethylphenol	l		ND	U.Q2.1 UJ	1,900	н	**	"	**	8270D
Bis(2-chloroethoxy)	methane		ND	U	370	"	**	"	94	8270D
2,4-Dichlorophenol			ND	U	1,900	"	14	e7	łe	8270D
1,2,4-Trichlorobenzo	ene		ND	U	370	19	71	"	**	8270D
Naphthalene			550		370	**	67	"	**	8270D
4-Chloroaniline			ND	U	1,900	"	ę9	"		8270D
Hexachlorobutadien	ie		ND	U	370	۳.	17		84	8270D
4-Chloro-3-methylp	henol		ND	U	1,900	"		18	99	8270D
2-Methylnaphthalen	ie		210	CL, J	370	11	89	"	79	8270D
Hexachlorocycloper	ntadiene		ND	U	1,900		17	"	19	8270D
2,4,6-Trichlorophen	ol		ND	U	1,900	**		17	14	8270D
2,4,5-Trichlorophen	ol		ND	U	1,900	"	**	71	44	8270D
2-Chloronaphthalen	e		ND	U	370		83	19	17	8270D
2-Nitroaniline			ND	U	1,900	**	**	17	11	8270D
Dimethyl phthalate			ND	U	370	"	19	17	"	8270D
2,6-Dinitrotoluene			ND	U	370	"	17	*	н	8270D
Acenaphthylene			19	CL J	370	"	**	**		8270D
3-Nitroaniline			ND	U	1,900	n	10	"	15	8270D
Acenaphthene			ND	U	370	"	**	"	53	8270D
2,4-Dinitrophenol			NE	4, C3, 1 W	7,500		**	*	**	8270D
4-Nitrophenol			ND	U	1,900	13	**	*	10	8270D
Dibenzofuran			ND) U	370	**	"	**	*	8270D
2.4-Dinitrotoluene			NE) U	370	78	n	۳	77	8270D
Diethyl phthalate			NE) U	370		29			8270D
Fluorene			NE) U	370	89 8	"	**	"	8270D
	mul athar		NE	ъ U	370		"	**	"	8270D
4-Chlorophenyl phe	cliyi culci		N	U, Q2, 1 U.	1,900	"	"	59	"	8270D
4-Nitroaniline	. In home of			U, C3, J UT	1,900	84			и	8270D
4,6-Dinitro-2-methy	yipnenoi			U, J, Q2 U		"	"	*1	**	8270D
Diphenyl amine) U	370	**	75	19	*	8270D
4-Bromophenyl phe				, ບ) ບ	370	**			**	8270D
Hexachlorobenzene	2			v, c3, s W		**	п		77	8270D
Pentachlorophenol					370	*	**	н		8270D
Phenanthrene			53I NI	ט 5 טי	370	17	"	"	54	8270D
Anthracene				U, Q2, J U		**	42	*1	59	8270D
Carbazole					370	41	и	n	"	8270D
Di-n-butyl phthalat	te		N	DU	570					

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte		Reanalysis / Extract I	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-04							S	oil - Sampl	ed: 04/18/18 10:30
Sample ID:	R0-4-0.5						Semivolati	le Organic Co	mpounds by	EPA Method 8270D
Fluoranthene			680		370	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
Pyrene			1,300		370					8270D
Butyl benzyl p	ohthalate		ND	U	370	15	m	н	89	8270D
Benzo(a)anthr	acene		500		370	. *	m	n		8270D
3,3'-Dichlorob	enzidine .		ND	U, C4, Q2, J	UJ 370			**	-	8270D
Chrysene			760		370		*			8270D
Bis(2-ethylhes	xyl) phthalate		660		370					8270D
Di-n-octyl pht	halate		ND	U, Q2, Q3, J	UJ 370	-	11	m	h	8270D
Benzo(b)fluor	anthene		1,400		370	п			91	8270D
Benzo(k)fluor	anthene			CL, J	370	π	*			8270D
Benzo(a)pyren	ne		660		370		-	79		8270D
Indeno(1,2,3-c	cd)pyrene		310	CL, J	370			н		8270D
Dibenz(a,h)an	thracene		ND	υ	370				π	8270D
Benzo(g,h,i)pe	erylene		350	GL J	370	**	99			8270D
Heneicosanol			2,400	N TIC, J		*	Ħ		=	8270D
Hentriacontan	e		2,800	N TIC, J			**	*		8270D
Surrogate: 2-F	Fluorophenol			81 %	20-111%		*		"	
Surrogate: Ph	enol-d5			81 %	20-111%		77	-	17	
Surrogate: 2-0	Chlorophenol-d4			85 %	20-121%		"	-	7	
Surrogate: 1,2	-Dichlorobenzene-d4			72 %	20-136%		"	"	~	
Surrogate: Nit	trobenzene-d5			78 %	20-125%		W	19	11	
Surrogate: 2-F	Fluorobiphenyl			75 %	20-121%			"	7	
Surrogate: 2,4	,6-Tribromophenol			100 %	20-146%		~	π	#	
Surrogate: Ter	phenyl-d14			92 %	20-131%		77			
Sample ID:	R0-4-0.5	a,			1996 (9) (2 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3		Conventional (Themistry Par	meters by A	PHA/EPA Methods
% Solids			91		1	%	B18D123	04/25/18	04/26/18	

FAL 7/9/18

BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018 Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA Laboratory Job Number: 1805009 Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START) Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 9 soil samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameters and EPA methods:

• Resource Conservation and Recovery Act (RCRA) Metals by SW-846 Method 6010C/7473

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

Samples Lab ID Matrix Date Collected Date Prepared Date Analyzed Mercury Metals Mercury Metals 1805009-01 Topsoil-1 Soil 04/20/18 05/14/18 05/07/18 05/14/18 05/18/18 Soil Backfill-1 1805009-02 04/23/18 05/14/18 05/07/18 05/14/18 05/18/18 R6-3-1¹ 1805009-03 Soil 04/24/18 05/07/18 ---05/18/18 --R6-3-1-dup1 1805009-04 Soil 04/24/18 05/07/18 05/18/18 ------R6-2-1¹ 1805009-05 Soil 04/24/18 05/07/18 05/18/18 -----Backfill-3 1805009-06 04/26/18 05/14/18 05/07/18 05/14/18 05/18/18. Soil 05/21/18 R1-1-1¹ 1805009-07 04/27/18 05/07/18 05/21/18 Soil ------R5-1-1¹ 1805009-08 05/21/18 Soil 04/28/18 05/07/18 --Topsoil-3 1805009-09 Soil 04/30/18 05/14/18 05/07/18 05/14/18 05/18/18. 05/21/18

RCRA METALS by SW-846 METHOD 6010C/7473

The following table summarizes the samples for which this data validation is being conducted.

This sample was analyzed for lead only.

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the metals analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

The laboratory noted that the samples were received pre-dried and sieved in XRF cups and therefore sample results were reported on an "as received" basis. No percent solids determination was performed and no dry-weight correction applied.

2. Holding Times

The samples were analyzed within the required holding time limits: 28 days for mercury and 180 days for all other metals. The laboratory reported that samples analyzed for mercury, Topsoil-1, Backfill-1, Backfill-3, and Topsoil-3, were received above the recommended temperature range (actual temperature not reported). The results for mercury in these samples were qualified as estimated (J for detects, UJ for nondetects).

3. Blank Results

Method blanks were analyzed with the metal and mercury sample group and were free of target compound contamination above the quantitation limits.

4. <u>Laboratory Control Sample Results</u>

Laboratory control samples (standard reference materials) were analyzed with the sample group and all recoveries were within quality control (QC) limits, with the exception of barium (0%). The amount of barium in the laboratory control sample was below the quantitation limit for barium; therefore, no qualification of data was necessary.

5. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

Sample R6-2-1 was used for MS and MSD analyses for target analytes except mercury, and sample Topsoil-1 was used for MS and MSD analyses for mercury. All recoveries were within QC limits with the exception of barium (127%) and lead (142%). All relative percent differences (RPDs) were within QC limits. The concentrations of lead in the unspiked sample was greater than four times the amount of the spiked concentrations; therefore, no action was required for lead. No qualification of data was necessary for barium as sample R6-2-1 was not analyzed for barium.

6. <u>Field Duplicate Results</u>

The sample set included one field duplicate pair, R6-3-1 and R6-3-1-dup. The RPD for lead (the only target analyte for this pair) was within control limits (\leq 50%).

7. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifier:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place.

The metals data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY WITH QUALIFIERS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18123D
Project Number: R18S51	75 Hawthorne Street	Reported:	05/24/18 08:52
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805009-01							Soli	id - Sample	ed: 04/20/18 16:05
Sample ID: Mercury	Topsoil-1		ND	A2, 4, U U U U U	0.029	mg/kg wet	B18E097	Metals by 05/14/18	EPA 6000/7 05/14/18	000 Series Methods 7473
Arsenic			4.9		2		B18E048	05/07/18	05/18/18	6010C
Barium			170		5				π	6010C
Cadmium				U	0.50				*	6010C
Chromium			39		1					6010C
ead			3.9		3				н	6010C
elenium			ND		2				-	6010C
lilver				U	1				n	6010C
Lab ID:	1805009-02	dan 1997 ya dan da ang ang ang ang ang ang ang ang ang an	*****	····				Sol	id - Sample	ed: 04/23/18 14:37
Sample ID:	Backfill-1		0.56	121	0.023	mg/kg wet	B18E097	Metals by 05/14/18	EPA 6000/7 05/14/18	000 Series Methods 7473
Mercury					2		B18E048	05/07/18	05/18/18	6010C
Arsenic			4.5		5		-			6010C
Barium			160 ND		0.50		Ħ	н		6010C
Cadmium					1					6010C
Chromium			28		3					6010C
Lead			4.5	U	2		97	w		6010C
Selenium				U	1		19		n	6010C
Silver			160					Sei	ld - Sampi	od: 04/24/18 14:45
Lab ID:	1805009-03							Metals by	EPA 6000/	1000 Series Methods
Sample ID: Lead	R6-3-1		1,200)	3	mg/kg wet	B18E048	05/07/18	05/18/18	
Lab ID:	1805009-04									ed: 04/24/18 14:47
Sample ID:	R6-3-1-dup		1.20		3	mg/kg wet	B18E048	Metals by 05/07/18	05/18/18	7000 Series Methods 6010C
Lend			1,30	,				Se	lid - Sampl	ed: 04/24/18 15:37
Lab ID: Sample ID:	1805009-05 R6-2-1		57	D	3	mg/kg wet	B18E048	05/07/18	05/18/18	and the second state of th
Lead		and a second second second and a second s						So	lid - Samp	led: 04/26/18 11:02
Lab ID:	1805009-06							Metals b	y EPA 6000	7000 Series Method
Sample ID:	Backfill-3		0.1	3 2 J	0.029	mg/kg wet	B18E097	05/14/18	05/14/18	7473
Mercury		751	4		2	*	B18E048	05/07/18	05/21/18	
Arsenic		RE1	18		5			90	05/18/18	
Barium				D U	0.50			#	05/21/18	
Cadmium		RE1			1		π			6010C
Chromium		RE1		12	3			-		6010C
Lead		RE1		.8	2					6010C
Selenium		RE1			1			-	-	6010C
Silver		REI	N	DU	1			0	alid Corre	oled: 04/27/18 16:1

Lab ID: 1805009-07

KAZ 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18123D
Project Number: R18S51	75 Hawthorne Street	Reported:	05/24/18 08:52
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract	Qualifiers / Result Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805009-07						So	lid - Sampl	ed: 04/27/18 16:15
Sample ID: Lead	R1-1-1	RE1	220	3	mg/kg wet	B18E048	Metals by 05/07/18	EPA 6000/ 05/21/18	7000 Series Methods 6010C
Lab ID:	1805009-08	·					So	lid - Sampl	ed: 04/28/18 16:20
Sample 1D: Lead	R5-1-1	RE1	840	3	mg/kg wet	B18E048	Metals by 05/07/18	epa 6000/ 05/21/18	7000 Series Methods 6010C
Lab ID:	1805009-09						So	lid - Sampl	ed: 04/30/18 16:34
Sample ID: Mercury	Topsoil-3		ND +2, J, U UJ	0.030	mg/kg wet	B18E097	Metals by 05/14/18	v EPA 6000/ 05/14/18	7000 Series Methods 7473
Arsenic		RE1	4.4	2	*	B18E048	05/07/18	05/21/18	6010C
Barium			170	5	17	"	**	05/18/18	6010C
Cadmium		REI	ND U	0.50	61	4)	"	05/21/18	6010C
Chromium		RE1	40	1	*	и	н	н	6010C
Lead		REI	4.1	3	*	"	**	**	6010C
Selenium		RE1	ND U	2	17	23	**	**	6010C
Silver		RE1	ND U	1	**	63	¥?	**	6010C



BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018
Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA
Laboratory Job Number: 1805010
Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 9 air filter samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameter and EPA method:

• Lead by Federal Equivalent Method for Air Monitoring EQL-0710-192

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

LEAD by FEDERAL EQUIVALENT METHOD FOR AIR MONITORING EQL-0710-192

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
BR-23-041818	1805010-01	Air Filter	04/18/18	05/18/18	05/22/18
BR-25-041818	1805010-02	Air Filter	04/18/18	05/18/18	05/22/18
BR-PA1-042118	1805010-03	Air Filter	04/21/18	05/18/18	05/22/18
BR-PA2-042118	1805010-04	Air Filter	04/21/18	05/18/18	05/22/18
BR-22-042318	1805010-05	Air Filter	04/23/18	05/18/18	05/22/18
BR-24-042318	1805010-06	Air Filter	04/23/18	05/18/18	05/22/18
BR-22-050218	1805010-07	Air Filter	05/02/18	05/18/18	05/22/18
BR-21-050218	1805010-08	Air Filter	05/02/18	05/18/18	05/22/18
BR-24-050218	1805010-09	Air Filter	05/02/18	05/18/18	05/22/18

The following table summarizes the samples for which this data validation is being conducted.

1. <u>Data Verification Check</u>

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the lead analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time limits of 180 days.

3. <u>Blank Results</u>

A method blank was analyzed with the sample group and was free of target compound contamination above the quantitation limit.

4. Laboratory Control Sample Results

A laboratory control sample and a laboratory control sample duplicate were analyzed with the sample group and the recoveries and relative percent difference (RPD) were within quality control limits.

5. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

No MS/MSD analyses were conducted.

6. <u>Field Duplicate Results</u>

The sample set included one field duplicate pair, BR-22-050218 and BR-21-050218. The RPD for lead was within control limits (\leq 50%).

7. <u>Overall Assessment</u>

The lead data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY



LCS (B18E119-BS1)

Lead

Lead

United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804 Fax:(510) 412-2302 Phone:(510) 412-2300

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18123E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/24/18 10:06
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch Prepared Analyzed Method
ab ID:	1805010-01						Air Filter - Sampled: 04/18/18 08:41
a mple ID: .ead	BR-23-041818		NE	U	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
.ab 1D:	1805010-02						Air Filter - Sampled: 04/18/18 08:43
ample ID: .ead	BR-25-041818		ND) U	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
ab ID:	1805010-03						Air Filter - Sampled: 04/21/18 08:30
Sample ID: Lead	BR-PA1-042118		NE) U	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
Lab ID:	1805010-04						Air Filter - Sampled: 04/21/18 08:31
Sample ID: Lead	BR-PA2-042118		0.19)	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
Lab ID:	1805010-05						Air Filter - Sampled: 04/23/18 07:29
Sample ID: Lead	BR-22-042318		NE) U	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
 Lab ID:	1805010-06						Air Filter - Sampled: 04/23/18 07:31
Sample ID: Lead	BR-24-042318		N) U	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
	1805010-07						Air Filter - Sampled: 05/02/18 07:34
Lab ID: Sample ID:	BR-22-050218		0.4	6	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
Lead 							Air Filter - Sampled: 05/02/18 07:34
Lab ID: Sample ID:	1805010-08 BR-21-050218		0.4	1	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitoring B18E119 05/18/18 05/22/18 EQL-0710-192
Lead	1805010-09						Air Filter - Sampled: 05/02/18 07:30
Lab ID: Sample ID:	BR-24-050218		.N	рU	0.18	ug/Filter	Federal Equivalent Methods for Ambient Air Monitorin B18E119 05/18/18 05/22/18 EQL-0710-192
Lead	Inntrol						
Quality C	ontrol			Qualifiers /	Quantitation	Units	Spike Source %REC RPD 18P1 Level Result %REC Limits Lin
Analyte		Result	-	Comments	Limit		Prepared: 05/18/18 Analyzed: 05/22
Batch B18E11	19 - Air Filter Digestion	- Lead on Air Filters			-	Federal	Equivalent Methods for Ambient Air Monitoring - Quality (Con
Blank (B18E)	(19-BLK1)			U	0.1	8 ug/Filter	
Lead		ND		0			

BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018
Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA
Laboratory Job Number: 1805026
Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 3 air filter samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameter and EPA method:

• Lead by Federal Equivalent Method for Air Monitoring EQL-0710-192

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

LEAD by FEDERAL EQUIVALENT METHOD FOR AIR MONITORING EQL-0710-192

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
BR-22-050718	1805026-01	Air Filter	05/07/18	05/18/18	05/22/18
BR-12-051018	1805026-02	Air Filter	05/10/18	05/18/18	05/22/18
BR-FB	1805026-03	Air Filter	05/11/18	05/18/18	05/22/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the lead analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time limits of 180 days.

3. Blank Results

A method blank was analyzed with the sample group and was free of target compound contamination above the quantitation limit.

4. Laboratory Control Sample Results

A laboratory control sample and a laboratory control sample duplicate were analyzed with the sample group and the recoveries and relative percent difference (RPD) were within quality control limits.

5. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

No MS/MSD analyses were conducted.

6. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

7. <u>Overall Assessment</u>

The lead data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims		Emergency Response Section	SDG:	18131A
Project Number; R18S51		75 Hawthorne Street	Reported:	05/30/18 13:55
Project: Bercovich Smelter April 2018 Removal		San Francisco CA, 94105		
Action				
Sample Results				
Deserthein /	Qualifiam /	Quantitation		

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID;	1805026-01							Air Filt	er - Sample	ed: 05/07/18 07:35
Sample ID:	BR-22-050718						Federal Eq	uivalent Meth	ods for Amb	ient Air Monitoring
Lead			ND	U	0.18	ug/Filter	B18E119	05/18/18	05/22/18	EQL-0710-192
Lab ID:	1805026-02							Air Filt	er - Sample	ed: 05/10/18 10:58
Sample ID: Lead	BR-12-051018		ND	U	0.18	ug/Filter	Federal Eq B18E119	uivalent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Lab ID:	1805026-03							Air Filt	ter - Sample	ed: 05/11/18 08:00
Sample ID: Lead	BR-FB		ND	υ	0.18	ug/Filter	Federal Eq B18E119	uivalent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Quality C	ontrol									
Analyte	1	Result	<	Qualifiers / Comments	Quantitation Limit	** **	Spike Source Level Resul	AUDEO	%REC Limits	RPD RPD Limit
Batch B18E119) - Air Filter Digestion	- Lead on Air Filters			\times	Federal E	Equivalent Method			8 Analyzed: 05/22/18 ring - Quality Control
Blank (B18E11	9-BLK1)		/							
Lead		NÐ		U	0.18	ug/Filter				
LCS (B18E119	-BS1)									
Lead		2			0.18	ug/Filter	2.00	100	80-120	
LCS Dup (B18	E119-BSD1)									
Lead	/	2.01			0.18	ug/Filter	2.00	101	80-120	0.6 20

BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018
Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA
Laboratory Job Number: 1805027
Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 5 soil samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameters and EPA methods:

• Resource Conservation and Recovery Act (RCRA) Metals by SW-846 Method 6010C/7473

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

RCRA METALS by SW-846 METHOD 6010C/7473

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared		Date A	nalyzed
				Mercury	Metals	Mercury	Metals
Backfill-6	1805027-01	Soil	05/10/18	05/14/18	05/16/18	05/14/18	05/23/18
R8-2-6 ¹	1805027-02	Soil	05/07/18		05/16/18		05/23/18
R12-1-1 ¹	1805027-03	Soil	05/10/18		05/16/18		05/23/18
R9-1-1 ¹	1805027-04	Soil	05/10/18		05/16/18		05/23/18
R9-1-1-dup1	1805027-05	Soil	05/10/18		05/16/18		05/23/18

¹ This sample was analyzed for lead only.

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the metals analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

The laboratory noted that the samples were received pre-dried and sieved in XRF cups and therefore sample results were reported on an "as received" basis. No percent solids determination was performed and no dry-weight correction applied.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time limits: 28 days for mercury and 180 days for all other metals. The laboratory reported that samples were received at 24 °C, which is above the recommended temperature range for mercury. The results for mercury in sample Backfill-6 (the only sample analyzed for mercury) were qualified as estimated (J).

3. Blank Results

Method blanks were analyzed with the metal and mercury sample group and were free of target compound contamination above the quantitation limits.

4. <u>Laboratory Control Sample Results</u>

Laboratory control samples (standard reference materials) were analyzed with the sample group and all recoveries were within quality control (QC) limits, with the exception of barium (0%). The amount of barium in the laboratory control sample was below the quantitation limit for barium; therefore, no qualification of data was necessary.

5. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

Sample Backfill-6 was used for MS and MSD analyses for metals and mercury. All recoveries and relative percent differences (RPDs) were within QC limits.

6. Field Duplicate Results

The sample set included one field duplicate pair, R9-1-1 and R9-1-1-dup. The RPD for lead (the only target analyte for this pair) was within control limits (\leq 50%).

7. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifier:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place.

The metals data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY WITH QUALIFIERS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18131B
Project Number: R18S51	75 Hawthorne Street	Reported:	05/31/18 11:26
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract Resu	Qualifiers / It Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805027-01						S	oil - Sampl	ed: 05/10/18 14:34
Sample ID: Mercury	Backfill-6	0	12 3 J	0.025	mg/kg wet	B18E097	Metals by 05/14/18	EPA 6000/7	7000 Series Methods
Arsenic			5.0	2	N	B18E115	05/16/18	05/23/18	6010C
Barium			50	5			н	*	6010C
Cadmium			D U	0.50		π			6010C
Chromium			30	1					6010C
Lead			4.7	3					6010C
Selenium		1	U U	2		*			6010C
Silver		1	ND U	1			π		6010C
Lab ID:	1805027-02					n hagi manja mala i manda ayan sa kata a sa sa	S	oil - Sample	ed: 05/07/18 15:38
Sample ID: Lead	R8-2-6	3,2	00	3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/23/18	6010C
Lab ID:	1805027-03	<mark>ben kalan kanan dan pi</mark> rka dari kanan di kanan kanan dari kanan di sebuah di kanan di sebuah di kanan di sebuah					S	oil - Sample	ed: 05/10/18 15:24
Sample ID: Lead	R12-1-1	8	10	3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/25/18	000 Series Methods 6010C
Lab ID:	1805027-04						S	oil - Sample	ed: 05/10/18 15:53
Sample ID: Lead	R9-1-1	9	10	3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/23/18	6010C
Lab ID:	1805027-05	demonstrates day was tagt - find, tagt in ordering participants provide and in and input find - finders date the					S	oil - Sample	ed: 05/10/18 15:54
Sample ID: Lead	R9-1-1_dup	g	60	3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7	000 Series Methods 6010C

tion 7/9/18

BERCOVICH LEAD SMELTER SITE REMOVAL ACTION DATA VALIDATION REPORT

Date: July 9, 2018
Laboratory: Environmental Protection Agency (EPA) Region 9 Laboratory, Richmond, CA
Laboratory Job Number: 1805029
Data Validation Performed By: Kelly Luck, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)
Weston Work Order #: 20409.012.002.0163.00

This data validation report has been prepared by WESTON START under the START IV U.S. EPA Region 9 contract. This report documents the data validation for 4 soil samples collected for the Bercovich Lead Smelter Site Removal Action that were analyzed for the following parameters and EPA methods:

- Volatile Organic Compounds (VOCs) by SW-846 Method 8260C
- Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270D
- Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO) by SW-846 Method 8015C
- TPH as Diesel Range Organics (DRO) and Oil Range Organics (ORO) by SW-846 Method 8015C
- Polychlorinated Biphenyls (PCBs) by SW-846 Method 8082A
- Resource Conservation and Recovery Act (RCRA) Metals by SW-846 Method 6010C/7473

A level II data package was received from EPA Region 9 Laboratory, Richmond, CA. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidance for Superfund Organic Methods Data Review" dated January 2017 and the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2017. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

VOCs by SW-846 METHOD 8260C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1805029-01	Soil	05/14/18	05/15/18	05/16/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/15/18	05/16/18
R0-3-0.5	1805029-03	Soil	05/14/18	05/15/18	05/16/18
R0-4-0.5	1805029-04	Soil	05/14/18	05/15/18	05/16/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the VOCs analysis, requested analytical data package items were received from the laboratory and the analyses requested were performed.

2. Holding Times

The samples were extracted and analyzed within the required holding time limit of 14 days. The laboratory noted that samples were received at 8 °C. All detected results for VOCs in all samples were qualified as estimated (J) due to exceedance of preservation temperature. No qualification of nondetect results was necessary (professional judgement of data validator).

3. <u>Blanks</u>

A method blank was analyzed with the VOC sample group and was free of target compound contamination above the detection limits.

4. <u>Surrogate Results</u>

The following surrogate recovery results were outside the laboratory-established quality control (QC) limits.

- in sample R0-1-0.5: toluene-d₈ (120%), 4-bromofluorobenzene (68%), 1,2-dichlorobenzene-d₄ (42%)
- in sample R0-2-0.5: 4-bromofluorobenzene (71%), 1,2-dichlorobenzene-d₄ (63%)

Nondetect results for the following compounds were qualified as estimated (UJ) in samples R0-1-0.5 and R0-2-0.5 due to low recoveries of the associated surrogates, 4-bromofluorobenzene and/or 1,2-dichlorobenzene-d4: 1,1,2-2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane (EDB), 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-hexanone, 4-methyl-2-pentanone (MIBK), bromoform, chlorobenzene, chlorodibromomethane, and tetrachloroethene.

No qualification of data was necessary due to the high recovery of the toluene-d₈ surrogate as no target analytes associated with that surrogate were detected in sample R0-1-0.5.

5. <u>Laboratory Control Sample (LCS) Results</u>

One LCS was analyzed with the sample group and the recoveries were within laboratory-established QC limits.

6. <u>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results</u>

Sample R0-4-0.5 was used for MS/MSD analyses. All recoveries were within laboratory-established QC limits, with the exception of trichloroethene (74%), 4-methyl-2-pentanone (MIBK; 124%), 1,3-dichlorobenzene (52 and 56%), 1,4-dichlorobenzene (51 and 56%), and 1,2-dichlorobenzene (45 and 50%). All relative percent differences (RPDs) were within QC limits.

The nondetect results for trichloroethene, 4-methyl-2-pentanone (MIBK), 1,3-dichlorobenzene, 1,4-dichlorobenzene, and 1,2-dichlorobenzene in sample R0-4-0.5 were qualified as estimated (UJ).

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place for detected results, and removed both qualifiers for nondetect results.

C3, J, U: Indicates that the initial calibration for this analyte did not meet calibration criteria, that the reported result should be an estimate, and that the analyte was not detected. The data validator removed these qualifiers and added a "UJ" (estimated) qualifier.

Q1, J, U: Indicates that the internal standard associated with this analyte did not meet area count criteria. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q4: Indicates that the matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q7: Indicates that surrogate spike recoveries for this sample were outside control limits. The data validator removed these qualifiers and, for most analytes, added "UJ" (estimated) qualifiers (see discussion above for surrogate spike recoveries).

N TIC, J: Indicates a Tentatively Identified Compound; this compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive. The data validator left these qualifiers in place.

The VOC data are acceptable for use based on the information received.

SVOCs by SW-846 METHOD 8270D

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1805029-01	Soil	05/14/18	05/21/18	05/22/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/21/18	05/22/18
R0-3-0.5	1805029-03	Soil	05/14/18	05/21/18	05/22/18
R0-4-0.5	1805029-04	Soil	05/14/18	05/21/18	05/22/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the SVOCs analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

The laboratory noted that sample extracts were dark, foamy, viscous, which necessitated a final extract volume greater than specified in the method. The corresponding QC samples were diluted to the same final extract volume, which resulted in some analytes in the LCS, MS, and/or MSD being diluted out.

2. Holding Times

The samples were extracted and analyzed within the required holding times of 14 days from sample collection to extraction and 40 days from extraction to analysis. The laboratory noted that samples were received at 8 °C. All detected results for SVOCs in all samples were qualified as estimated (J) due to exceedance of preservation temperature. No qualification of nondetect results was necessary (professional judgement of data validator).

3. <u>Blanks</u>

A method blank was analyzed with the sample group and was free of target compound contamination above the detection limits.

4. <u>Surrogate Results</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. LCS Results

An LCS was analyzed with the sample group and all recoveries were within the laboratory-established QC limits, with the following exceptions: nitrobenzene (113%) and 4-nitroaniline (53%). The nondetect results for 4-nitroaniline were qualified as estimated (UJ) in

all samples. No qualification of data was necessary for nitrobenzene as the LCS recovery was high and the analyte was not detected in any samples.

There was no recovery of 2,4-dinitrophenol, pentachlorophenol, or 3,3'-dichlorobenzidine in the LCS; however, the spike levels for these analytes were below the quantitation limits. Therefore, no qualification of data was necessary.

6. <u>MS and MSD Results</u>

Sample R0-4-0.5 was used for MS/MSD analyses. All recoveries were within laboratory-established QC limits, with the following exceptions: 4-chloroaniline (no recovery), hexachlorocyclopentadiene (no recovery), 3-nitroaniline (26%), 2,4-dinitrophenol (no recovery), 4-nitroaniline (42%), 4,6-dinitro-2-methylphenol (\leq 27%), pentachlorophenol (no recovery), carbazole (114 and 125%), fluoranthene (55%), 3,3'-dichlorobenzidine (no recovery), di-n-octyl-phthalate (159 and 190%), benzo(b)fluoranthene (131 and 148%), benzo(k)fluoranthene (152%), benzo(a)pyrene (124%), dibenz(a,h)anthracene (63%), and benzo(g,h,i)perylene (33%). All RPDs were within QC limits, with the exception of chrysene (23%), indeno(1,2,3-cd)pyrene (25%) and benzo(g,h,i)perylene (33%).

The results for the following analytes were qualified as estimated (J for detects and UJ for nondetects) in sample R0-4-0.5: 4-chloroaniline, hexachlorocyclopentadiene, 3-nitroaniline, 2,4-dinitrophenol, 4-nitroaniline, 4,6-dinitro-2-methylphenol, pentachlorophenol, carbazole, fluoranthene, 3,3'-dichlorobenzidine, chrysene, di-n-octyl-phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

The recovery of butyl benzyl phthalate was outside QC limits; however, the however, the concentration of butyl benzyl phthalate in the unspiked sample was greater than four times the amount of the spiked concentration; therefore, no action was required.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place for detected results, and removed both qualifiers for nondetect results.

C1, J: Indicates that the reported concentration for this analyte is below the quantitation limit and that the reported result should be considered an estimate. The data validator removed the "C1" qualifier and left the "J" qualifier in place.

C3, J, U: Indicates that the initial calibration for this analyte did not meet calibration criteria, that the reported result should be an estimate, and that the analyte was not detected. The data validator removed these qualifiers and added a "UJ" (estimated) qualifier.

C4, J, U: Indicates that the calibration verification check did not meet % difference criteria for this analyte. The data validator removed these qualifiers and added a "UJ" (estimated) qualifier.

Q2, J, U: Indicates that the laboratory control standard associated with this sample did not meet recovery criteria for this analyte. For 4-nitroaniline, the data validator removed these qualifiers and added "UJ" (estimated) qualifiers. For 2,4-dinitrophenol, pentachlorophenol, or 3,3'-dichlorobenzidine, the data validator removed the "Q2" and "J" qualifiers and left the "U" qualifier in place (see discussion of laboratory control sample above).

Q3: Indicates that the quantitation limit standard did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "UJ" (estimated) qualifiers.

Q4: Indicates that the matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte. The data validator removed these qualifiers and added "J" or "UJ" (estimated) qualifiers.

Q6: Indicates that the matrix spike/matrix spike duplicate precision criteria were not met for this analyte. The data validator removed these qualifiers and added "J" or "UJ" (estimated) qualifiers.

N TIC, J: Indicates a Tentatively Identified Compound; this compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive. The data validator left these qualifiers in place.

The SVOCs data are acceptable for use as qualified based on the information received.

TPH AS GRO by SW-846 METHOD 8015C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1805029-01	Soil	05/14/18	05/15/18	05/17/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/15/18	05/17/18
R0-3-0.5	1805029-03	Soil	05/14/18	05/15/18	05/17/18
R0-4-0.5	1805029-04	Soil	05/14/18	05/15/18	05/17/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the TPH as GRO analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were analyzed within the required holding time of 14 days. The laboratory noted that samples were received at 8 °C. No qualification of nondetect results was necessary (professional judgement of data validator), and all results for TPH as GRO in the sample group were nondetects.

3. <u>Blanks</u>

A method blank was analyzed with the sample group and free of target compound contamination above the detection limit.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. LCS Results

An LCS was analyzed with the sample group and the recovery was within laboratory-established QC limits.

6. <u>MS and MS Duplicate (MSD) Results</u>

Sample R0-4-0.5 was used for MS and MSD analyses. Analyte recoveries and RPDs were within laboratory-established QC limits.

The data package contained results for two sets of MS/MSD analyses, both stated to be conducted using sample R0-4-0.5. However, one set (identified as B18E117-MS1 and B18E117-MSD1) reported results of 390 mg/kg for the unspiked sample, which did not correspond to the nondetect result reported for sample R0-4-0.5. Therefore, the data validator did not use these results to qualify data.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

All samples were diluted (50x), which elevated the quantitation limits.

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed both qualifiers for nondetect results.

Q6: Indicates that the matrix spike/matrix spike duplicate precision criteria were not met for this analyte. Because this QC failure referred to the MS/MSD pair that did not appear to be from the sample set, the data validator removed the qualifier.

The TPH as GRO data are acceptable for use as qualified based on the information received.

TPH AS DRO AND ORO by SW-846 METHOD 8015C

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
R0-1-0.5	1805029-01	Soil	05/14/18	05/16/18	05/21/18,
					05/22/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/16/18	05/21/18
R0-3-0.5	1805029-03	Soil	05/14/18	05/16/18	05/22/18
R0-4-0.5	1805029-04	Soil	05/14/18	05/16/18	05/21/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the TPH as DRO and ORO analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were extracted and analyzed within the required holding time limits of 7 days from sample collection to extraction and 40 days from extraction to analysis. The laboratory noted that samples were received at 8 °C. All detected results for TPH as DRO and ORO in all samples were qualified as estimated (J) due to exceedance of preservation temperature.

3. <u>Blanks</u>

A method blank was analyzed with the samples and was free of target compound contamination above the quantitation limits.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. <u>LCS Results</u>

An LCS was analyzed with the sample group and the recovery was within laboratory-established QC limits.

6. <u>MS and MSD Results</u>

Sample R0-4-0.5 was used for MS/MSD analyses, and recoveries and RPD were within QC limits.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place for detected results (all samples).

F13: Indicates fuel or product type mixed or unknown. The data validator left these qualifiers in place.

The TPH as DRO and ORO data are acceptable for use as qualified based on the information received.

PCBs by SW-846 METHOD 8082A

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID Matrix Date Collected		Date Prepared	Date Analyzed	
R0-1-0.5	1805029-01	Soil	05/14/18	05/17/18	05/22/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/17/18	05/22/18

Samples	Lab ID	Lab IDMatrixDate CollectedI		Date Prepared	Date Analyzed	
R0-3-0.5	1805029-03	Soil	05/14/18	05/17/18	05/22/18	
R0-4-0.5	1805029-04	Soil	05/14/18	05/17/18	05/22/18	

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the PCBs analysis, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. <u>Holding Times</u>

The samples were extracted and analyzed within the required holding times of 14 days from sample collection to extraction and 40 days from extraction to analysis. The laboratory noted that samples were received at 8 °C. All detected results for PCBs in all samples were qualified as estimated (J) due to exceedance of preservation temperature. No qualification of nondetect results was necessary (professional judgement of data validator).

3. <u>Blanks</u>

A method blank was analyzed with the sample group and was free of target compound contamination above the quantitation limits.

4. <u>Surrogates</u>

The surrogate recovery results were within the laboratory-established QC limits.

5. <u>LCS Results</u>

An LCS was analyzed with the sample set. All recoveries were within laboratory-established QC limits.

6. <u>MS and MSD Results</u>

Sample R0-4-0.5 was used for MS and MSD analyses. All analyte recoveries and RPDs were within laboratory-established QC limits.

7. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

8. <u>Overall Assessment</u>

The PCBs data are acceptable for use as qualified based on the information received.

RCRA METALS by SW-846 METHOD 6010C/7473

The following table summarizes the samples for which this data validation is being conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared		Date Analyzed	
				Mercury	Metals	Mercury	Metals
R0-1-0.5	1805029-01	Soil	05/14/18	05/17/18	05/17/18	05/16/18	05/23/18
R0-2-0.5	1805029-02	Soil	05/14/18	05/17/18	05/17/18	05/16/18	05/23/18
R0-3-0.5	1805029-03	Soil	05/14/18	05/17/18	05/17/18	05/17/18	05/23/18
R0-4-0.5	1805029-04	Soil	05/14/18	05/17/18	05/17/18	05/16/18	05/23/18

1. Data Verification Check

A data verification and completeness check was performed in accordance with the Stage 1 and 2A verification checks outlined in the EPA "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use" dated January 13, 2009. For the metals analyses, all analytical data package items were received from the laboratory and the analysis requested was performed.

2. Holding Times

The samples were analyzed within the required holding time limits: 28 days for mercury and 180 days for all other metals. The laboratory noted that samples were received at 8 °C. All detected results for mercury (the only metal analyte with a temperature preservation requirement) in all samples were qualified as estimated (J) due to exceedance of preservation temperature.

3. Blank Results

Method blanks were analyzed with the metal and mercury sample group and were free of target compound contamination above the quantitation limits.

4. LCS Results

LCSs (standard reference materials) were analyzed with the sample group and all recoveries were within QC limits, with the exception of barium (0%). The amount of barium in the laboratory control sample was below the quantitation limit for barium; therefore, no qualification of data was necessary.

5. <u>MS and MSD Results</u>

Sample R0-4-0.5 was used for MS and MSD analyses. All recoveries were within QC limits with the exception of chromium (175 and 248%). The RPDs for chromium (22%), lead (49%), and mercury (23%) were outside QC limits. The results for chromium, lead, and mercury in sample R0-4-0.5 were qualified as estimated (J).

The MS/MSD recoveries were outside the QC limits for lead; however, the concentration of lead in the unspiked sample was greater than four times the amount of the spiked concentrations.

6. <u>Field Duplicate Results</u>

The sample set did not include any field duplicate pairs.

7. <u>Overall Assessment</u>

EPA Region 9 Laboratory flagged sample results with the following laboratory qualifiers:

A2, J: Indicates that the sample was received above the recommended temperature range. The data validator removed the "A2" qualifier and left the "J" qualifier in place.

Q4, J: Indicates that the matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte. The data validator removed the "Q4" qualifier and left the "J" qualifier in place.

Q6: Indicates that the matrix spike/matrix spike duplicate precision criteria were not met for this analyte. The data validator removed these qualifiers and added "J" qualifiers.

The metals data are acceptable for use as qualified based on the information received.

ATTACHMENT

EPA REGION 9 LABORATORY RESULTS SUMMARY WITH QUALIFIERS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzeo	l Method
Lab ID: 1805029-01							s	oil - Samp	led: 05/14/18 16:05
Sample ID: R0-1-0.5 Mercury		0.58	A2, J	0.036	mg/kg dry	B18E116	Metals by 05/17/18	y EPA 6000/ 05/17/18	7000 Series Methods 7473
Arsenic		20	1	2.9	17	B18E115	05/16/18	05/23/18	6010C
Barium		310		7.2	"	п	"	14	6010C
Cadmium		3.9		0.72			**	**	6010C
Chromium		59		1.4	**	п	Ŧ	+7	6010C
Lead		180		4,3	**	17	19	**	6010C
Selenium		ND	U	2.9	17	"	17	п	6010C
Silver		ND	U	1.4	17	"	**	**	6010C
Sample ID: R0-1-0.5							Pur	geable Petro	Heum Hydrocarbons
TPH - Gasoline Range Organics		ND	A2, I. U	14	88	B18E117	05/15/18	05/17/18	8015C
Surrogate: a,a,a-Trifluorotoluene			82 %	76-124%		*	"	n	
Sample ID: R0-1-0.5									eum Hydrocarbons
TPH - Diesel Range Organics			AS, F13, J	14	"	B18E114	05/16/18	05/21/18	
TPH - Oil Range Organics	REI	3,900	A2, J, F13	290	н	"	11	05/22/18	8015C
Surrogate: Hexacosane			66 %	20-111%		<i>17</i>	n	05/21/18	
Sample ID: R0-1-0.5									EPA Method 8082A
Aroclor 1016		ND	U	19	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
Aroclor 1221		ND	U	39	14	11	"	*	8082A
Aroclor 1232		ND	U	19	"	19	Ħ	*1	8082A
Aroclor 1242		ND	U	19	"		n		8082A
Aroclor 1248		ND	U	19	**	n	**	"	8082A
Aroclor 1254		ND	U	19	57			11	8082A
Aroclor-1260		33	J	19	"	**	"	"	8082A
Aroclor 1262		ND		19	**	19	n	13	8082A
Aroclor 1268		ND	U	19	n	"	79		8082A
Surrogate: Tetrachloro-m-xylene			61 %	20-140%		"	"	n	
Surrogate: Decachlorobiphenyl			46 %	20-125%		"	н	77	
Sample ID: R0-1-0.5						Volati	le Ornanie Cou	moonade by	EPA Method 8260C
Dichlorodifluoromethane		ND	A2, C3, J, U	5	я	B18E111	05/15/18	05/16/18	8260C
Chloromethane		ND	A2, J, U	5	**	*	n	"	8260C
Vinyl chloride		ND	A2, J. U	5	н	"	**	"	8260C
Bromomethane		ND	A2, J, U	5	н	n	n	*	8260C
Chloroethane		ND	A2, J, U	5	я	u	"	"	8260C
Trichlorofluoromethane		ND	A2, L U	5		"	н	"	8260C
1,1-Dichloroethene			A2, J. U	5	"	"	17	17	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane			A2, J. U	5	я	n	n		8260C
					**	,,	"	"	
Acetone		ND	A2, U	40					8260C

KAL 2/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract	Qualifiers / Result Comments	Quantitat Limit	ion Units	Batch	Prepared	Analyzed	Method
Lab ID: 180502	29-01					S	oil - Sampl	ed: 05/14/18 16:05
Sample ID: R0-1-0. Carbon disulfide	5	ND A3. J. U		5 ug/kg dry	Volatile B18E111	e Organic Cor 05/15/18	mpounds by 05/16/18	EPA Method 8260C 8260C
Dichloromethane		ND A2, J, U		5 "	"	19	n	8260C
trans-1,2-Dichloroethene		ND A2, I, U		5 "	"	**	"	8260C
tert-Butyl methyl ether (M	ITBE)	ND AZ, J. U	2	0 "	"	**	"	8260C
1,1-Dichloroethane		ND A2, LU		5 "	"	44	"	8260C
cis-1,2-Dichloroethene		ND A2, LU		5 "	**	79	"	8260C
2-Butanone (MEK)		ND A2, LU	4	0 "	H	12	"	8260C
Chloroform		ND ALLU		5 "	"	61	17	8260C
1,1,1-Trichloroethane		ND A2, J, U		5 "	"	24		8260C
Carbon tetrachloride		ND A2, LU		5 "	**	**	"	8260C
1,1-Dichloropropene		ND AS, J, U		5 "	٣	17	17	8260C
Benzene		ND A2, Q7, L U		5 "	11	в	87	8260C
1.2-Dichloroethane		ND AS, U		5 "	п	24	**	8260C
Trichloroethene		ND A2, U		5 "	17		74	8260C
.2-Dichloropropane		ND A2, I. U		5 "	"	ч	"	8260C
Bromodichloromethane		ND A2, U		5 "	"	19	"	8260C
cis-1,3-Dichloropropene		ND A2, U		5 "	*		"	8260C
4-Methyl-2-pentanone (M	IBK)	ND 72, Q1, Q7,	4			n	19	8260C
Toluene		ND A2, Q1, J, (IJ	5 "	"			8260C
rans-1,3-Dichloropropene	,	ND A2 U		5 "	11	"	**	8260C
1,1.2-Trichloroethane		ND A2, J, Q7, U		5 "	17	"	10	8260C
Tetrachloroethene		ND A2, Q1, 3 , 1 07, U		5 "	"	n	"	8260C
1,3-Dichloropropane		ND A2, Q1, J, (T	5 "	79	**	14	8260C
2-Hexanone		ND A2, Q1, J.	4	0 "	"	п	**	8260C
Chlorodibromomethane		ND A2, Q1, J , L	15	5 "	**	"	"	8260C
1,2-Dibromoethane (EDB))	ND A2, Q1, J, L	IJ	5 "		14	19	8260C
Chlorobenzene		ND A2, Q1, J, L Q7, U	5	5 "	u	n	"	8260C
Ethylbenzene		ND A2, Q1, J, L Q7, LL	Ū	5 "	"	43	"	8260C
n&p-Xylene		ND A2, Q1, J, L Q7, U	(J 1	0 "	"	"	н	8260C
o-Xylene		ND - A2, Q1, J , (Q7, U	I	5 "	"		14	8260C
Styrene		ND A2, Q1, J.	uJ	5 "	"	85	**	8260C
Bromoform		ND- <u>A2, Q1, J.</u> (Q7, U	Ū	5 "	*	"	н	8260C

EN 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

	_	_	_
Samp		Doon	40
Samo	le.	Resu	ILS.

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-01							s	oil - Sampl	led: 05/14/18 16:05
Sample ID: R0-1-0.5						Volatil	e Organic Co	mpounds by	EPA Method 8260C
1,1,2,2-Tetrachloroethane		ND		5	ug/kg dry	B18E111	05/15/18	05/16/18	8260C
1,2,3-Trichloropropane		ND	Q 7, U A 2, Q1, J,	5	**	**		**	8260C
			Q7, U				77	н	22/26
1,3-Dichlorobenzene		ND	A2, Q1, J, Q7, U	UCT 5					8260C
1,4-Dichlorobenzene		ND	A2, Q1, J,	5	77	17		**	8260C
1,2-Dichlorobenzene		ND	Q7, U A2, Q1, J,	UJ 5	17	**	"	97	8260C
1,2-Dibromo-3-chloropropane		ND	Q7, U A2, Q1, J, L Q7, U	20	"	n	"	в	8260C
Surrogate: 1,2-Dichloroethane-d4			131 %	63-144%		lt.	"	**	
Surrogate: Toluene-d8			120 %	86-111%		<i>u</i>	#1	**	
Surrogate: 4-Bromofluorobenzene			68 %	81-11000		"	17	11	
Surrogate: 1,2-Dichlorobenzene-d4			42 %	75-112%		"	"	e7	
Sample 1D: R0-1-0.5						Semivolatil	e Organic Co	mpounds by	EPA Method 8270D
Phenol		ND	A2, J, U	7,900	*1	B18E126	05/21/18	05/22/18	8270D
Bis(2-chloroethyl)ether		ND	A2, J, U	1,500	**	"		88	8270D
2-Chlorophenol		NÐ	A2, I, U	7,900	"	n	**	**	8270D
1,3-Dichlorobenzene		ND	A2, J. U	1,500	"	p	**	**	8270D
1,4-Dichlorobenzene		NĐ	A2, L U	1,500	"	n	"		8270D
Benzyl alcohol		NĐ	A2, L U	7,900	n	"	19		8270D
1,2-Dichlorobenzene		NĐ	A2, I, U	1,500	п	"	"	**	8270D
2-Methylphenol		ND	A2, J. U	7,900	"	"	"	88	8270D
Bis(2-chloro-1-methylethyl) ether		NÞ	A2, J. U	1,500	"	"	п	54	8270D
3&4-Methylphenol		ND	A2, J. U	7,900	**	11	łī	69	8270D
N-Nitrosodipropylamine		ND	A2, L U	1,500		. "	**	78	8270D
Hexachloroethane		ND	A2, L U	1,500	"	n	п	13	8270D
Nitrobenzene		ND	A2, L U	1,500	"	*1	п	59	8270D
Isophorone		ND	A2, L.U	1,500	"	17	"	17	8270D
2-Nitrophenol		ND	A2, L U	7,900	17	н		**	8270D
2,4-Dimethylphenol		ND	A2, L U	7,900	п	н		**	8270D
Bis(2-chloroethoxy)methane			A2, I, U	1,500	"	"	n	17	8270D
2,4-Dichlorophenol			A2, L U	7,900	"	"	11	34	8270D
1,2,4-Trichlorobenzene			A2, J, U	1,500	"	17	n	24	8270D
Naphthalene			A2, J, U	1,500		"		**	8270D
4-Chloroaniline			A2, J. U	7,900	"	"		78	8270D
Hexachlorobutadiene			AS J, U	1,500	**	"		18	8270D
					**	"	-	19	8270D
4-Chloro-3-methylphenol		ND	A2, I, U	7,900					02700

Kor 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-01							S	oil - Sampl	ed: 05/14/18 16:05
Sample ID: 2-Methylnaphth	R0-1-0.5		ND	A2, I, U	1,500	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	mpounds by 05/22/18	EPA Method 8270D 8270D
Hexachlorocycl	opentadiene		ND	A2, 1, U	7,900		"	**	и	8270D
2,4,6-Trichlorop	phenol		ND	A2, 1, U	7,900		"	"		8270D
2,4,5-Trichlorog	phenol		ND	A2, 1, U	7,900	-	"	"	м	8270D
2-Chloronaphth	alene		ND	A2, J, U	1,500	n	**	**	-	8270D
2-Nitroaniline			ND	A2, 1, U	7,900		"	"	"	8270D
Dimethyl phtha	late		ND	A2, J, U	1,500	"		"	"	8270D
2,6-Dinitrotolue	ene		ND	AZ, LU	1,500	"	17	π	и	8270D
Acenaphtbylene	2		ND	A2, 1, U	1,500		**	"	54	8270D
3-Nitroaniline			ND	A2, J, U	7,900	н	r	n	"	8270D
Acenaphthene			ND	A2, I, U	1,500	н	"	87	н	8270D
2,4-Dinitrophen	nol		ND	A2, C3, C 4, J, Q2, U	31,000	n	*	**	"	8270D
4-Nitrophenol			ND	A2, I, U	7,900	"	"	"		8270D
Dibenzofuran			ND	A2, 1, U	1,500	"	57	"		8270D
2,4-Dinitrotolue	ene		ND	A2, J, U	1,500	n	87	"	"	8270D
Diethyl phthala	te		ND	A2, J, U	1,500	**	"	n	"	8270D
Fluorene			ND	A2, J, U	1,500	н	"	"	17	8270D
4-Chiorophenyl	phenyl ether		ND	A2, 1, U	1,500	14	**	**	18	8270D
4-Nitroaniline			ND	A2, J, Q2, U	5 7,900	"	"	н	11	8270D
4.6-Dinitro-2-m	ethylphenol		ND	A2, J, U	7,900	"	11	**	м	8270D
Diphenyl amine	•		ND	A2, J, U	1,500	"	f1	"	11	8270D
4-Bromophenyl	phenyl ether		NĐ	A2, J, U	1,500	*	**	"	*1	8270D
Hexachlorobenz	zene		NĐ	A2, J, U	1,500	**	n	*	17	8270D
Pentachlorophe	nol		ND	A2, C4, J , U Q 2, U	31,000	"	"		"	8270D
Phenanthrene			NĐ	A2, L U	1,500	99	и	*	n	8270D
Anthracene			ND	A2, J, U	1,500	**	17	17	77	8270D
Carbazole			NĐ	A2, J, U	1,500	"	"	ч	7	8270D
Di-n-butyl phth	alate		NÐ	A2, I, U	1,500	"	"	"	"	8270D
Fluoranthene			1,000	A2, C1, J	1,500	"	71	п	17	8270D
Pyrene				A2, C1, J	1,500	14		п	19	8270D
Butyl benzyl ph			ND	A2, J, U	1,500	n	п		"	8270D
Benzo(a)anthra			NÐ		1,500	,,	'n	11	e4	8270D
3,3'-Dichlorobe	nzidine		ND	A2, J, O2, U	7,900	н	"	n	71	8270D
Chrysene			1,400		1,500	н	a	н	n	8270D
Bis(2-ethylhexy				XS J	1,500	"	n	"	"	8270D
Di-n-octyl phth	alate		ND	A2, C3, J, U U.	1,500	n	n		P	8270D

For 7/9/15



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte	Reanalysis / Extract Resu		ualifiers / omments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-01							Se	oil - Sampl	ed: 05/14/18 16:05
Sample ID: R0-1-0.5						Semivolatile	Organic Con	npounds by	EPA Method 8270D
Benzo(b)fluoranthene	1,2	200 2	12, C1, J	1,500	ug/kg dry	B18E126	05/21/18	05/22/18	
Benzo(k)fluoranthene	1	ND	A2, J, U	1,500	-	n	-	-	8270D
Benzo(a)pyrenc	1	ND	A2, J, U	1,500	-				8270D
Indeno(1,2,3-cd)pyrene	1	ND 2	A2, I, U	1,500			-		8270D
Dibenz(a,h)anthracene	1	ND	A2, J, U	1,500		*	-	-	8270D
Benzo(g,h,i)perylene	8	860	12, C1, J	1,500					8270D
Dodecadien-one, -dimethy	4,1	100 1	TIC, J						8270D
Hexadecanoic acid	5,3	300 1	N TIC, J						8270D
Sitosterol	18,0	000 1	N TIC, J			н		99	8270D
unknown hydrocarbon (01)	11,0	000 1	TIC, J						8270D
unknown hydrocarbon (02)	15,0	000 1	N TIC, J		н		-		8270D
Surrogate: 2-Fluorophenol			85 %	20-111%		*	-		
Surrogate: Phenol-d5			89 %	20-111%		"	м	*	
Surrogate: 2-Chlorophenol-d4			90 %	20-121%		"	19	~	
Surrogate: 1,2-Dichlorobenzene-d4			79 %	20-136%		M	~		
Surrogate: Nitrobenzene-d5			84 %	20-125%		м	"	W	
Surrogate: 2-Fluorobiphenyl			84 %	20-121%		"	"	*	
Surrogate: 2,4,6-Tribromophenol			113 %	20-146%		"		"	
Surrogate: Terphenyl-d14			115 %	20-131%		*		-	
Sample ID: R0-1-0.5 % Solids		70		1	%	Conventional Ch B18E135	emistry Para 05/23/18	meters by A 05/24/18	PHA/EPA Methods 3550C
Lab ID: 1805029-02							So		ed: 05/14/18 16:10
Sample ID: R0-2-0.5									1000 Series Methods
Mercury	0.	27 7	2 , J	0.030	mg/kg dry	B18E116	05/17/18		7473
Arsenic		9.1		2		B18E115	05/16/18	05/23/18	6010C
Barium	2	220		5		m	-		6010C
Cadmium		2.0		0.50					6010C
Chromium		46		1	-			*	6010C
lead	1	150		3	н			*	6010C
Selenium	1	ND I	J	2	**			*	6010C
Silver	'n	ND I	J	1	n	и		10	6010C
Sample ID: R0-2-0.5	yan yan yan kanina dina yang kanina dan kanina sagalara yan yana hala saya mada kanina. Any yan kana kanina						Pure	cable Petro	leum Hydrocarbons
TPH - Gasoline Range Organics	1	ND 7	2, 1 U	8.3		B18E117	05/15/18	05/17/18	8015C
Surrogate: a,a,a-Trifluorotoluene			89 %	76-124%		"	**	"	
Sample ID: R0-2-0.5									leum Hydrocarbons
TPH - Diesel Range Organics			2, F13, J	10		B18E114	05/16/18	05/21/18	
TPH - Oil Range Organics	1,5	500 2	13 , F13, J	40			×	*	8015C
Surrogate: Hexacosane			50 %	20-111%			-	"	

Fr. 2/9/18

Page 7 of 38 1805029 9L_Analysis FINAL 06 01 18 0914



 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitat Limit		Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-02								S	oil - Sample	ed: 05/14/18 16:1
Sample ID: R0-2-0.5		ND				. An der				EPA Method 8082
Aroclor 1016		ND			3	ug/kg dry "	B18E120	05/17/18	05/22/18	
Aroclor 1221		ND			.7	27				8082A
Aroclor 1232		ND			3	-		"	17	8082A
Aroclor 1242		ND			3				57	8082A
Aroclor 1248		ND			3	11		17	n	8082A
Aroclor 1254 Aroclor-1260		ND	-		3			17	81	8082A
Arocior-1260 Arocior 1262		15 ND	J U		3 3		"	"		8082A 8082A
Aroclor 1268		ND			3	**	**	19	"	8082A
Surrogate: Tetrachloro-m-xylene			66 %	20-140%			π	77	IT	
Surrogate: Decachlorobiphenyl			51 %	20-125%			"	"	"	
Sample ID: R0-2-0.5							Volati	lo Organia Cor	nnoundt by	EPA Method 82600
Dichlorodifluoromethane		ND	A2, C3, J, U	UT 4.	2	"	B18E111	05/15/18	05/16/18	8260C
Chloromethane		ND	A2, I, U	4.	2	"	77	"	"	8260C
Vinyl chloride		ND	A2, J, U	4.	2	17	17	"	"	8260C
Bromomethane		ND	A2 J, U	4.	2	n	16	"		8260C
Chloroethane		ND	A2, J, U	4.	2		"	"		8260C
Trichlorofluoromethane		ND	A2, J, U	4.	2		"		"	8260C
1,1-Dichloroethene		ND	A2 J.U	4.	2		58	"	"	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	A2, J. U	4.	2	"	н	"	11	8260C
Acetone		130	AZ, J	3	4	п	**	"	"	8260C
Carbon disulfide		ND	A2, L U	4.	2	**	"	t i	+*	8260C
Dichloromethane		ND	A2, J, U	4.	2	*	71	**	"	8260C
rans-1,2-Dichloroethene		ND	A2, I, U	4.	2		**	"	**	8260C
ert-Butyl methyl ether (MTBE)		ND	A2, I, U	1	7		**	17	n	8260C
1,1-Dichloroethane		ND	A2, I, U	4.	2	11	**	н	19	8260C
cis-1,2-Dichloroethene		ND	A2, J. U	4.	2	"	10	11	**	8260C
2-Butanone (MEK)		34	AZ, J	3	4	"	*1	Π	77	8260C
Chloroform		ND	A2, L U	4.	2	**	"	*	"	8260C
1,1,1-Trichloroethane		ND	A2, I, U	4.	2	**	н	"		8260C
Carbon tetrachloride		ND	A2, J, U	4.	2	**	17	11	**	8260C
1,1-Dichloropropene		ND	A2, J, U	4.	2	**	**	"	11	8260C
Benzene		ND	A2, I, U	4.	2	17	17		и ,	8260C
1,2-Dichloroethane		ND	A2, I, U	4.		**	17	"	19	8260C
Trichloroethene		ND	A2, J, U	4.		17	17	"	19	8260C
		ND					şa	"		8260C



 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
 Fax:(510) 412-2302

			_
Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A	
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14	
Project: Bercovich Smclter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-02						S	oil - Sampl	ed: 05/14/18 16:1
Sample ID: R0-2-0.5 Bromodichloromethane	ND	A2, L U	4.2	ug/kg dry	Volatile B18E111	• Organic Co 05/15/18	mpounds by 05/16/18	EPA Method 82600 8260C
cis-1,3-Dichloropropene	ND	A2, J, U	4.2	н	**	*3	"	8260C
4-Methyl-2-pentanone (MIBK)	ND	A 2, Q1, Q7 , U	J 34	41	**		*1	8260C
Foluene	NU	A2, J, Q1, U	J 4.2	**	ee	99	11	8260C
rans-1,3-Dichloropropene	ND	A2, J. U	4.2	۳		8	я	8260C
,1,2-Trichloroethane	ND	A2, Q7, J, U	5 4.2	**	es.	*7	"	8260C
etrachloroethene	ND	A2, J, Q7, U Q1, U	4.2	n	n	73	"	8260C
,3-Dichloropropane	ND	A2, Q1, J, U	J 4.2	"	e e	-		8260C
2-Hexanone	ND	A2, Q1, J, U.	J 34	"	"	**	"	8260C
Chlorodibromomethane	ND	A2, Q1, Q7, U	4.2		67	f7	"	8260C
.2-Dibromoethane (EDB)	ND	A2, Q1, J, U,	J 4.2	79	19	**	"	8260C
hlorobenzene	ND	A2, Q1, Q7, U	4.2	48	**	п	n	8260C
thylbenzene	ND	A2, Q1, J, U	4 .2		e1	*1	"	8260C
a&p-Xylene	ND	A2, Q1, J. U	J 8.4	н	29	8 8	и	8260C
-Xylene	ND	A2, Q1, J, U L	4.2	n	48	29	n	8260C
tyrene	ND	A2, J, Q1, U	J 4.2	ei	n	28	"	8260C
romoform	ND	A2, Q1, Q7, U	4.2	"	**	π	"	8260C
,1,2,2-Tetrachloroethane	ND	A2, Q1, J, U, Q7, U	4.2	**	79	*1	"	8260C
,2,3-Trichloropropane	ND	A2, Q1, J, U Q7, U	J 4.2	79	**	st	"	8260C
,3-Dichlorobenzene	NE	A2, Q1, J, U.	5 4.2	50	67		n	8260C
.4-Dichlorobenzene	ND	A2, Q1, J, U,	J 4.2	79	*	n	"	8260C
,2-Dichlorobenzene	ND	A2, Q1, J. U	J 4.2	**	6 7	88	n	8260C
,2-Dibromo-3-chloropropane	NÜ	A2, Q1, J, U.	J 17	ξ1	"	n		8260C
Iexanol, ethyl	13			n	п	n	97	8260C
Octanone	10	N TIC, J		**	27	**	n	8260C
urrogate: 1,2-Dichloroethane-d4		120 %	63-144%		17	77	~	
urrogate: Toluene-d8		109 %	86-111%		**	11	59	
Surrogate: 4-Bromofluorobenzene		71 %	81-110%		17	77	**	
Surrogate: 1,2-Dichlorobenzene-d4		63 %	75-112%			"	"	
Sample ID: R0-2-0.5		-						EPA Method 8270
Phenol	N	U, A2, I	5,200	91	B18E126	05/21/18	05/22/18	8270D
Bis(2-chloroethyl)ether	N	A2, LU	1,000	"	14	**	"	8270D

KA 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A	
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 0	9:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action		145-59-5 Table 198	

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-02						Se	oil - Sampl	ed: 05/14/18 16:10
Sample ID: R0-2-0.5 2-Chlorophenol	NI) A2, I, U	5,200	ug/kg dry	Semivolatil B18E126	e Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
1,3-Dichlorobenzene	N	U, A2, J	1,000		"	n	"	8270D
1,4-Dichlorobenzene	NI	U, A2, J	1,000		"	**		8270D
Benzyl alcohol	NI	A2, J, U	5,200	*	"	17	10	8270D
1,2-Dichlorobenzene	NI	U, A2, J	1,000	"	"	58		8270D
2-Methylphenol	NI	A2, J, U	5,200	17	"	**	**	8270D
Bis(2-chloro-1-methylethyl) ether	NI	U, A2, J	1,000	"	"	**	"	8270D
3&4-Methylphenol	NI	A2, J, U	5,200	17	**	**	**	8270D
N-Nitrosodipropylamine	NI	U, A2, J	1,000		"	"	**	8270D
Hexachloroethane	N	U, A2, J	1,000	71	"	11	"	8270D
Nitrobenzene	NI	U, A2, J	1,000	**	"	17	22	8270D
sophorone	N	U, A2, J	1,000	"	"	n	**	8270D
2-Nitrophenol	N	A2, J, U	5,200	"	"	89	"	8270D
2,4-Dimethylphenol	NI	A2, J. U	5,200	а	"	**	**	8270D
Bis(2-chloroethoxy)methane	NI	A2, J, U	1,000	"	"	**		8270D
2,4-Dichlorophenol	NI	U, A2, 1	5,200	"	"	17	*	8270D
1,2,4-Trichlorobenzene	NL	A2, J, U	1,000	"	**	**	14	8270D
Naphthalene	N	U, A2, 1	1,000	"	"	"	87	8270D
4-Chloroaniline	N	A2, L U	5,200	n	۳			8270D
Hexachlorobutadiene	N	A2, J, U	1,000	"	19		**	8270D
4-Chloro-3-methylphenol	N	A2 J, U	5,200	n	"	"	**	8270D
2-Methylnaphthalene	N	A2, J, U	1,000		"	n	**	8270D
Hexachlorocyclopentadiene	N	U, A2, J	5,200	"	"	11	**	8270D
2,4,6-Trichlorophenol	NE	U, A2, J	5,200	"	"	н	**	8270D
2,4,5-Trichlorophenol	N	U, A2, J	5,200	"	"		н	8270D
2-Chloronaphthalene	NI	U, J, A2	1,000	п	**	**		8270D
2-Nitroaniline	NI	A2, J, U	5,200	п	"	**	**	8270D
Dimethyl phthalate	NI	A2, J, U	1,000	"	"		**	8270D
2,6-Dinitrotoluene	NI	U, ASJ	1,000	**	"	**		8270D
Acenaphthylene	NE	A2, J, U	1,000	vr	"	**		8270D
3-Nitroaniline		A2, J. U	5,200		19	11		8270D
Acenaphthene		U, A2, J	1,000	"	*	п	**	8270D
2,4-Dinitrophenol	NE	A2, C3, C4,	21,000	71	54	н	**	8270D
4-Nitrophenol	NE	A2, J, U	5,200		"	**		8270D
Dibenzofuran	NE	A2, LU	1,000			**	**	8270D
2,4-Dinitrotoluene	N	A2, J, U	1,000		**	**	"	8270D

KAC 7/9/18

Page 10 of 38 1805029 9L_Analysis FINAL 06 01 18 0914



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte		Reanalysis / Extract H		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	DID: 1805029-02 Soil - Sampled: 05/14/18 16:							ed: 05/14/18 16:10		
Sample ID: Diethyl phthalat	R0-2-0.5		ND	ASJ, U	1,000	ug/kg dry	Semivolatile B18E126	Organic Con 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
Fluorene			ND	A2, J. U	1,000	"	"	**		8270D
4-Chlorophenyl	phenyl ether		ND	A2, J. U	1,000		н	**	"	8270D
4-Nitroaniline	phenyrether		ND	A2, J, Q2, U UJ		н		**	"	8270D
4,6-Dinitro-2-m	ethylphenol		ND	A2, J, U	5,200	14	"		*	8270D
Diphenyl amine			ND	A2, J, U	1,000	rr	"			8270D
4-Bromophenyl							n	89		8270D
			ND	A2, J, U	1,000	**	н	12		8270D
Hexachlorobenz			ND	U, AS, J	1,000		н	11	"	
Pentachloropher	nol		ND	A2, C4, J, Q2, U UJ	21,000					8270D
Phenanthrene			ND	U, A2, J	1,000	н	17	**		8270D
Anthracene			ND	A2, L U	1,000	n	"	**	"	8270D
Carbazole			ND	A2, J, U	1,000		64	t 1	-	8270D
Di-n-butyl phtha	alate		ND	J, A2, U	1,000	**	п	**	91	8270D
Fluoranthene			62)	A2, C1, J	1,000	"	"	**	и	8270D
Pyrene				A2, CL J	1,000	н	н	ę.	17	8270D
Butyl benzyl ph	thalate		76)	A2, CL J	1,000	"	а	ft	н	8270D
Benzo(a)anthrac	cene		ND	A2, L U	1,000	**	17	*	•	8270D
3,3'-Dichlorobe	nzidine		ND	U, A2, L O2	5,200	19	п	**	я	8270D
Chrysene			995	A2, C1, J	1,000	**	19	**		8270D
Bis(2-ethylhexy	l) phthalate		7,70)	A2, J	1,000	n	п	8	17	8270D
Di-n-octyl phtha	alate		ND	U, A2, C3, J U.	1,000	н	n	n	"	8270D
Benzo(b)fluorar	nthene		1,600	AS, J	1,000	"	**	**	"	8270D
Benzo(k)fluorar	nthene		ND	A2, I, U	1,000	**	"		"	8270D
Benzo(a)pyrene	:		ND	A2, J, U	1,000	n	"	99	"	8270D
Indeno(1,2,3-cd)pyrene		ND	U, A2, 1	1,000	14	17	24		8270D
Dibenz(a,h)anth	racene		ND	A2, I, U	1,000	**	11	24	"	8270D
Benzo(g,h,i)per	ylene		ND	J. A2, U	1,000	и	17	**	"	8270D
	is(methyloc (01)	2		N TIC, J		"	n	p	a	8270D
	is(methyloc (02)		60,000	N TIC, J		"	17	"	н	8270D
	is(methyloc (03)			N TIC, J		68	**	19	"	8270D
Phthalic acid, bi	is(methyloc (04)	6	520,000	N TIC, J		п	"	"	п	8270Đ
Phthalic acid, cy	yclohexyl n			N TIC, J		n	"	79	"	8270D
Phthalic acid, de	ecyl ethylh	3	90,000	N TIC, J			n	1	**	8270D
Phthalic acid, et	thylhexyl i	1	60,000	N TIC, J		n	n	34		8270D
Phthalic acid, he	exyl tridec	3	\$50,000	N TIC, J		"		19	"	8270D
Phthalic acid, is	oporpyl oc	1,2	200,000	N TIC, J		"	11	66	π	8270D
Phthalic acid, ne	eopentyl pe	1.2	200,000	N TIC, J		"	*	н	79	8270D

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
						S	oil - Sample	ed: 05/14/18 16:10
					Semivolati	le Organic Co	npounds by	EPA Method 8279D
		97 %	20-111%		B18E126	05/21/18	05/22/18	
		98 %	20-111%		м	**	*	
		99 %	20-121%			17	10	
		90 %	20-136%		"	"		
		91 %	20-125%		Ħ	<i>n</i>		
		87 %	20-121%			"	"	
		120 %	20-146%		м	"	-	
		127 %	20-131%		"	"		
		· · · · · · · · · · · · · · · · · · ·						
	99		1	%	B18E135	05/23/18	05/24/18	3550C
						S	oil - Sample	ed: 05/14/18 16:15
						Metals by	EPA 6000/7	000 Series Methods
	0.50	A2, J	0.025	mg/kg dry	B18E116	05/17/18	05/17/18	7473
RE1	14		2	39	B18E118	05/17/18	05/23/18	6010C
RE1	250		5.1		*	-		6010C
REI	3.2		0,51	-	17	91	60	6010C
RE1	48		1	н	84		*	6010C
RE1	410		3				**	6010C
RE1	ND	U	2	89	19			6010C
RE1	ND	U	1		н			6010C
	ND	A2, J, U	7.3	77	B18E117	Pury 05/15/18	geable Petrol 05/17/18	leum Hydrocarbons 8015C
		89 %	76-124%		W		"	
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		na anna athaont ar nach ar daonnach	Extra	ctable Petro	eum Hydrocarbons
RE2	320	7 J, F13	5.1	-	B18E114	05/16/18	05/22/18	8015C
RE1	2,900	A2, F13, J	200				05/22/18	8015C
RE2		63 %	20-111%		-	*	05/22/18	
ana anna ann a ann a ann an ann an bha a tha an ta an an ta an an ta an an an ta an an an ann an			<u> </u>		Pol	ychlorinated B	iphenyls by	EPA Method 8082A
	ND	U	13	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
	ND	υ	27	-	19	98	77	8082A
	ND	U	13	н				8082A
	ND	U	13	-	π			8082A
	ND	U		=	91	-		8082A
						*		8082A
		J	13		**	*	π	8082A
	ND		13					8082A
	RE1 RE1 RE1 RE1 RE1 RE1 RE1 RE1 RE1 RE1	99 0.50 RE1 14 RE1 250 RE1 32 RE1 48 RE1 410 RE1 ND RE1 ND RE1 ND RE1 ND RE1 ND RE1 ND RE1 ND ND RE1 2,900 <i>RE2</i> 320 RE1 2,900 <i>RE2</i> 320 RE1 2,900 <i>RE3</i> ND ND ND	97 % 98 % 99 % 90 % 90 % 91 % 87 % 120 % 127 % 99 99 0.50 Å2 J RE1 14 RE1 250 RE1 3.2 RE1 48 RE1 410 RE1 3.2 RE1 48 RE1 410 RE1 ND U RE1 ND U RE1 ND U RE1 ND U RE1 ND U RE1 ND U RE1 ND U	97 % 20-111% 98 % 20-111% 99 % 20-12% 90 % 20-136% 91 % 20-12% 90 % 20-12% 120 % 20-146% 127 % 20-131% 99 1 0.50 %2 J 0.025 RE1 14 2 RE1 250 5.1 RE1 250 5.1 RE1 3.2 0.51 RE1 48 1 RE1 410 3 RE1 ND U 2 RE1 ND U 1 ND X2-LU 7.3 89 % 76-124% RE2 320 %2 J, F13 5.1 RE1 2.900 %2 F13, J 200 RE2 63 % 20-111% ND U 13 ND U 13 ND U 13 ND U 13 ND U 13 ND U 13 ND U <td>97 % 20-111% 98 % 20-111% 99 % 20-121% 90 % 20-125% 87 % 20-125% 87 % 20-125% 87 % 20-125% 87 % 20-125% 120 % 20-146% 127 % 20-131% 99 1 % 99 1 % REI 14 2 " REI 3.2 0.51 " REI 3.2 0.51 " REI 48 1 " REI ND U 2 " REI ND U 1 " REI 2.900 % 76-124% " RE2 320 % 20-111% " RE2 63 % 20-111% " <t< td=""><td>97% 20-111% Semivolati 98% 20-111% - 99% 20-121% - 99% 20-136% - 90% 20-136% - 91% 20-121% - 90% 20-136% - 120% 20-136% - 127% 20-131% - 99 1 % Conventional C 99 1 % BI8E135 REI 14 2 9 REI 32 0.51 - REI 410 3 - REI ND U 1 - REI ND U 1 - RE2</td><td>Semivolatile Create Construction Semivolatile Create Construction Semivolatities Semivolaties Semivolatit</td><td>Soli - Sample Semivalatile Organic Company by BI8E726 Semivalatile Organic Company by State <t< td=""></t<></td></t<></td>	97 % 20-111% 98 % 20-111% 99 % 20-121% 90 % 20-125% 87 % 20-125% 87 % 20-125% 87 % 20-125% 87 % 20-125% 120 % 20-146% 127 % 20-131% 99 1 % 99 1 % REI 14 2 " REI 3.2 0.51 " REI 3.2 0.51 " REI 48 1 " REI ND U 2 " REI ND U 1 " REI 2.900 % 76-124% " RE2 320 % 20-111% " RE2 63 % 20-111% " <t< td=""><td>97% 20-111% Semivolati 98% 20-111% - 99% 20-121% - 99% 20-136% - 90% 20-136% - 91% 20-121% - 90% 20-136% - 120% 20-136% - 127% 20-131% - 99 1 % Conventional C 99 1 % BI8E135 REI 14 2 9 REI 32 0.51 - REI 410 3 - REI ND U 1 - REI ND U 1 - RE2</td><td>Semivolatile Create Construction Semivolatile Create Construction Semivolatities Semivolaties Semivolatit</td><td>Soli - Sample Semivalatile Organic Company by BI8E726 Semivalatile Organic Company by State <t< td=""></t<></td></t<>	97% 20-111% Semivolati 98% 20-111% - 99% 20-121% - 99% 20-136% - 90% 20-136% - 91% 20-121% - 90% 20-136% - 120% 20-136% - 127% 20-131% - 99 1 % Conventional C 99 1 % BI8E135 REI 14 2 9 REI 32 0.51 - REI 410 3 - REI ND U 1 - REI ND U 1 - RE2	Semivolatile Create Construction Semivolatities Semivolaties Semivolatit	Soli - Sample Semivalatile Organic Company by BI8E726 Semivalatile Organic Company by State Semivalatile Organic Company by State <t< td=""></t<>



 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
 Fax:(510) 412-2302

Γ	Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
	Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
	Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
	Action			

Analyte	Reanalysis / Extract	Qualifiers / Result Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-03		· · · · · · · · · · · · · · · · · · ·				s	oil - Sampl	ed: 05/14/18 16:15
Sample ID: R0-3-0.5					Poly	chlorinated I	liphenyls by	EPA Method 8082A
Surrogate: Tetrachloro-m-xylene		48 %	20-140%		B18E120 "	05/17/18	05/22/18	
Surrogate: Decachlorobiphenyl		38 %	20-125%					
Sample ID: R0-3-0.5 Dichlorodifluoromethane		ND A2, C3, J, U	UJ 3.6	"	Volatil B18E111	e Organic Co 05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
Chloromethane		ND U, A2, L	3.6	n	n	7	11	8260C
Vinyl chloride		ND AS JU	3.6	"	**	**	"	8260C
Bromomethane		ND A2, U	3.6	**	*		**	8260C
Chloroethane		ND A2 LU	3.6	**	11		**	8260C
Trichlorofluoromethane		ND A2, J, U	3.6	11	п	п	87	8260C
1,1-Dichloroethene		ND A2 J, U	3.6	**	"	rt	п	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane		ND A2, LU	3.6	11	п	"	n	8260C
Acetone		29 💦 J	29	"	"	"	19	8260C
Carbon disulfide		ND A2, J. U	3.6	ee	"	7*	**	8260C
Dichloromethane		ND J, A2, U	3.6	**	"	47	"	8260C
trans-1,2-Dichloroethene		ND A2, J, U	3.6	ee	"	79	"	8260C
tert-Butyl methyl ether (MTBE)		ND A2, J. U	14	rı	**	22	"	8260C
1,1-Dichloroethane		ND A2, J, U	3.6	**	**	**	**	8260C
cis-1,2-Dichloroethene		ND A2, , U	3.6	**	**	**	**	8260C
2-Butanone (MEK)		ND AS, J. U	29	ę.	"	15	**	8260C
Chloroform		ND A2, LU	3.6	F 5	**	**	"	8260C
1,1,1-Trichloroethane		ND A2, LU	3.6	"	**	**	19	8260C
Carbon tetrachloride		ND A2, U	3.6	"	e†	**	'n	8260C
1,1-Dichloropropene		ND A2, J. U	3.6	13	n	**	"	8260C
Benzene		ND A2, , U	3.6	**	"	**	"	8260C
1,2-Dichloroethane		ND A2, LU	3.6	11	**	**	"	8260C
Trichloroethene		ND A2, LU	3.6	**	н	**	"	8260C
1,2-Dichloropropane		ND A2, J, U	3.6	11	17	11	n	8260C
Bromodichloromethane		ND A2, J. U	3.6	19	17	*7	"	8260C
cis-1,3-Dichloropropene		ND A2, J, U	3.6	**	n	**	n	8260C
4-Methyl-2-pentanone (MIBK)		ND A2, J, U	29		11	13	"	8260C
Toluene		ND A2, J, U	3.6	**	**	**	**	8260C
trans-1,3-Dichloropropene		ND AS, J. U	3.6	**	**	**	**	8260C
1,1,2-Trichloroethane		ND AS, I, U	3.6	n	19	19	••	8260C
Tetrachloroethene		ND A2, LU	3.6	"		87	"	8260C
1,3-Dichloropropane		ND A2, J. U	3.6	58	n	"		8260C
2-Hexanone		ND A2, J. U	29	19	"	п	**	8260C
Chlorodibromomethane		ND A2, J, U	3.6	17	89			8260C

FAL 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-03						S	oil - Sampl	ed: 05/14/18 16:15
Sample ID: R0-3-0.5 1,2-Dibromoethane (EDB)	NI	A2 L U	3.6	ug/kg dry	Volatil B18E111	e Organic Con 05/15/18	mpounds by 05/16/18	EPA Method 8260C 8260C
Chlorobenzene	N	ALU	3.6	н				8260C
Ethylbenzene	NI	ALU	3.6	-				8260C
n&p-Xylene	N	A2 J.U	7.2	-		-		8260C
-Xylene	N	ALU	3.6		*			8260C
Styrene	N	U, AS, J	3.6					8260C
Bromoform	N	12. J. U	3.6					8260C
,1,2,2-Tetrachloroethane	N	AS JU	3.6		*			8260C
1,2,3-Trichloropropane	N	A2, LU	3.6	**				8260C
1,3-Dichlorobenzene	N	ALU	3.6					8260C
1,4-Dichlorobenzene	N	-	3.6					8260C
1,2-Dichlorobenzene	N	A2, I, U	3.6		н	-	*	8260C
,2-Dibromo-3-chloropropane	N	ALU	14		7	-		8260C
Octanol		N TIC, J						8260C
Octanone		N TIC, J		н				8260C
Surrogate: 1,2-Dichloroethane-d4		126 %	63-144%			-		
Surrogate: Toluene-d8		93 %	86-111%		"	-	*	
Surrogate: 4-Bromofluorobenzene		89 %	81-110%		"	"	*	
Surrogate: 1,2-Dichlorobenzene-d4		106 %	75-112%		7	17	8	
Sample ID: R0-3-0.5					Semivolatil B18E126	e Organic Con 05/21/18	mpounds by 05/22/18	EPA Method 8270D 8270D
Phenol	N		5,200	11	D18E120	W	7	
Bis(2-chloroethyl)ether		U, A2, J	1,000	7				8270D
2-Chlorophenol	N		5,200					8270D
1,3-Dichlorobenzene	N		1,000	*	9			8270D
1,4-Dichlorobenzene	N		1,000					8270D
Benzyl alcohol	N	U, A2, J	5,200		*			8270D
1,2-Dichlorobenzene	N		1,000		R			8270D
2-Methylphenol	N		5,200				*	8270D
Bis(2-chloro-1-methylethyl) ether	N	U, A2, 1	1,000	н		*	"	8270D
3&4-Methylphenol	N	U, J, A2	5,200			*	-	8270D
N-Nitrosodipropylamine	N	U, A2, I	1,000					8270D
Hexachloroethane	N	U, A2, J	1,000	41			*	8270D
Nitrobenzene	N	U, A2,	1,000		*	π	*	8270D
Isophorone	N	U, A2,	1,000			*	-	8270D
2-Nitrophenol	N	U, A2,	5,200	я		=	*	8270D
2,4-Dimethylphenol	N	U,A2,	5,200					8270D
		U, A2,						

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Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanatysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-03							s	oil - Sampl	ed: 05/14/18 16:15
Sample ID: 2,4-Dichlorophe	R0-3-0.5		ND	U, 72, J	5,200	ug/kg dry	Semivolatile B18E126	Organic Co 05/21/18	mpounds by 05/22/18	EPA Method 8270D 8270D
1,2,4-Trichlorob	benzene		ND	U, A2, J	1,000	**	м	м	*7	8270D
Naphthalene			ND	U, A2, J	1,000	"	"	м	"	8270D
4-Chloroaniline			ND	U, A2, 1	5,200	н	и	14	"	8270D
Hexachlorobuta	diene		ND	A2, J. U	1,000		"	"	"	8270D
4-Chloro-3-metl	hylphenol		ND	U, A2, 1	5,200		"	п	"	8270D
2-Methylnaphth	alene		ND	U, AS J	1,000	"		n	"	8270D
Hexachlorocycl	opentadiene		ND	U, A2, J	5,200	"	"	19	"	8270D
2,4,6-Trichlorop	bhenol		ND	U, A2, J	5,200	п	"	n	"	8270D
2,4,5-Trichlorop	bhenol		ND	U, A2, 1	5,200		"	n	W	8270D
2-Chloronaphtha	alene		ND	U, A2, J	1,000	"	31	17	17	8270D
2-Nitroaniline			ND	U, A2, J	5,200	"		n	п	8270D
Dimethyl phthal	ate		ND	A2, J, U	1,000	"	19	11	"	8270D
2,6-Dinitrotolue	ne		ND	U, A2, 1	1,000	n	м	**	"	8270D
Acenaphthylene	;		ND	A2, J. U	1,000	"	17	**	"	8270D
3-Nitroaniline			ND	U, A2, J	5,200	11	н	**	w	8270D
Acenaphthene			ND	U, A2, 1	1,000		*	*	"	8270D
2,4-Dinitrophen	ol		ND	U, A2, C3, C4, J, Q2	20,000	19	*7	9	"	8270D
4-Nitrophenol			ND	U, A2, J	5,200	17		**	n	8270D
Dibenzofuran			ND	A2, L U	1,000	**	**	19	"	8270D
2,4-Dinitrotolue	ne		ND	U, A2, J	1,000	14	**	*9	"	8270D
Diethyl phthalat	e		ND	U, A2, 1	1,000	17	39	19	"	8270D
Fluorene			ND	A2, J. U	1,000	**	**	41	"	8270D
4-Chlorophenyl	phenyl ether		ND	U, A2, J	1,000	89	**	*	**	8270D
4-Nitroaniline			ND	U, A2, J, Q2 L	5,200	**		n	n	8270D
4,6-Dinitro-2-m	ethylphenol		ND	U, A2, J	5,200	47		*	17	8270D
Diphenyl amine			ND	A2, I, U	1,000	n			ы	8270D
4-Bromophenyl	phenyl ether		ND	U, A2,	1,000	~	*7	**	78	8270D
Hexachlorobenz	æne		ND	U, A2, J	1,000	н		19	**	8270D
Pentachloropher	nol		ND	U, Q2, A2 , C4, J	20,000	19	12	17	"	8270D
Phenanthrene			880	A2, C1, J	1,000		*	**	*7	8270D
Anthracene			ND	72, L U	1,000	84			"	8270D
Carbazole			ND	A2, J, U	1,000	н		**		8270D
Di-n-butyl phtha	alate		ND	A2, J, U	1,000	-	n	17	"	8270Đ
Fluoranthene			1,000	742 J	1,000	"	"	"	**	8270D
Pyrene			1.660	AS, J	1,000	"	*1	11	"	8270D

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 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte	Reanalysis / Extract Resul	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-03	an an dan dan miningkan dari dalam dan					S	oil - Sampk	ed: 05/14/18 16:1:
Sample ID: R0-3-0.5					Semivolatil	e Organic Co	mpounds by	EPA Method 8270E
Butyl benzyl phthalate	N	D U, A2, L	1,000	ug/kg dry	B18E126	05/21/18	05/22/18	8270D
Benzo(a)anthracene	8:	0 A2, CI, J	1,000	π	er	-		8270D
3,3'-Dichlorobenzidine	N	D U, A2, J, Q2	5,200		9			8270D
Chrysene	1,10	0 12 J	1,000	н	н		17	8270D
Bis(2-ethylhexyl) phthalate	N	D U, AL	1,000		w	by .		8270D
Di-n-octyl phthalate	N	D U, A2, C3, J	1,000	н	ы			8270D
Benzo(b)fluoranthene	1,30	0 A2 J	1,000			81	**	8270D
Benzo(k)fluoranthene		D U, A2, J	1,000	π	п	**	**	8270D
Benzo(a)pyrene	90	0 J.A.2. CI	1,000	tr.	17	12	47	8270D
Indeno(1,2,3-cd)pyrene	52		1,000	н		97	97	8270D
Dibenz(a,h)anthracene		D U, AL	1,000			19	н	8270D
Benzo(g,h,i)perylene	7(-	1,000					8270D
Alkane: Straight-Chain		0 NTIC, J	1,000					8270D
Thomas outright Comme	5,7							02700
Surrogate: 2-Fluorophenol		95 %	20-111%		77	#	17	
Surrogate: Phenol-d5		93 %	20-111%		M		а	
Surrogate: 2-Chlorophenol-d4		95 %	20-121%		87	~	77	
Surrogate: 1,2-Dichlorobenzene-d4		87 %	20-136%		*	17	м	
Surrogate: Nitrobenzene-d5		89 %	20-125%		77			
Surrogate: 2-Fluorobiphenyl		86 %	20-121%		"	*	"	
Surrogate: 2,4,6-Tribromophenol		111 %	20-146%		И	17	17	
Surrogate: Terphenyl-d14		116 %	20-131%		"		*	
Sample ID: R0-3-0.5								PHA/EPA Methods
% Solids	5	9	1	%	B18E135	05/23/18	05/24/18	3550C
Lab ID: 1805029-04						S	oil - Sample	ed: 05/14/18 16:20
Sample ID: R0-4-0.5								000 Series Methods
Mercury		5 A. J. 06	0.024	mg/kg dry	B18E116	05/17/18		7473
Arsenic		2	2		B18E115	05/16/18	05/23/18	6010C
Barium	1:		5.1		17			6010C
Cadmium	1		0.51	n n	n n			6010C
Chromium		5 J, 04	1		19			6010C
Lead		0 丁	3				H.	6010C
Selenium		DU	2		"			6010C
Silver	N	DU	1	H		n	IT	6010C
Sample ID: R0-4-0.5								eum Hydrocarbons
TPH - Gasoline Range Organics	N	D U, A2 , J, Q6	6	es.	B18E117	05/15/18	05/17/18	8015C
Surrogate: a,a,a-Trifluorotoluene		90 %	76-124%		π	"	7	
Sample ID: R0-4-0.5						Extra	ctable Petrol	eum Hydrocarbons
TPH - Diesel Range Organics	9	2 J, 2, F13	10		B18E114	05/16/18	05/21/18	

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1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action				Emergency Re 75 Hawtho San Francisc	SDG: 18135A Reported: 06/01/18 09:14					
Sample R	esults									
Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
ab ID:	1805029-04							S	oil - Sampl	ed: 05/14/18 16:2
a mple ID: TPH - Oil Rang	R0-4-0.5 e Organics		820	* 2 , F'13, J	41	mg/kg dry	B18E114	Extra 05/16/18	ctable Petro 05/21/18	leum Hydrocarbor 8015C
Surrogate: Hexa	acosane			54 %	20-111%		n	"	"	
ample ID:	R0-4-0.5						Pot	ychlorinated B	iphenyls by	EPA Method 8082
Aroclor 1016			ND	U	13	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
Aroclor 1221			ND	U	27	"	м		**	8082A
roclor 1232			ND	U	13	39	**	"	7	8082A
Aroclor 1242			ND	U	13	**	"	17	42	8082A
Aroclor 1248			ND	U	13	54	11	9	19	8082A
Aroclor 1254			ND	U	13	1 9	"	н	69	8082A
roclor-1260			:3	J	13	н	"	n	29	8082A
roclor 1262			ND	ΰ	13	47	a	"	16	8082A
troclor 1268			ND	U	13	**	"	"	19	8082A
urrogate: Tetra	achloro-m-xylene			61 %	20-140%		"	77	**	
-	achlorobiphenyl			49 %	20-125%		n	"	"	
ample ID:	R0-4-0.5						Volati	le Organic Cor	nnounds by	EPA Method 8260
Dichlorodifluor	omethane		ND	A2, C3, J, U	UJ 3.3	**	B18E111	05/15/18	05/16/18	
hloromethane			ND	U, A2, 1	3.3	79	"	n	"	8260C
inyl chloride			ND	AS, LU	3.3	**	7	P	76	8260C
romomethane			ND	J, A2, U	3.3	**	"	"	**	8260C
hloroethane			ND	A2, J, U	3.3	29			84	8260C
richlorofluoro	methane		ND	A2, J, U	3.3	**		24	**	8260C
,1-Dichloroeth	iene		ND	A2, J, U	3.3	19	"	"	"	8260C
,1,2-Trichloro-	1,2,2-trifluoroethane		ND	A2, J. U	3.3		"	"	19	8260C
cetone			54	As, J	27		"	"	п	8260C
Carbon disulfid	e		ND	A2, LU	3.3	6	"	*	11	8260C
Dichloromethar	ne		ND	A2, J, U	3.3	**	"	"	"	8260C
ans-1,2-Dichlo	proethene		ND	U,A2 J	3.3		п		"	8260C
ert-Butyl methy	yl ether (MTBE)		ND	A2, J, U	13		*	**	"	8260C
,1-Dichloroeth	ane		ND	AS, J. U	3.3	F2	4	*	"	8260C
is-1,2-Dichloro	pethene			U, A2, J	3.3	"	"	"	n	8260C
-Butanone (M				U, A2, J	27	n	27	"	'n	8260C
Chloroform				U, A2 J	3.3		"	**	19	8260C
,1,1-Trichloroe	ethane			A2, J. U	3.3	"	11		19	8260C
arbon tetrachl				U, A2, J	3.3	п		**	"	8260C
,1-Dichloropro				AS J.U		**		"	"	8260C
	ALCHC .		ND	A2. , U	3.3					02000

KAR 7/9/18



 1337 S. 46th Street, Building 201, Richmond, CA
 94804

 Phone:(510) 412-2300
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Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Sample Results

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzeo	Method
Lab 1D: 1805029-04		_ <u></u>				So	il - Samp	led: 05/14/18 16:20
Sample ID: R0-4-0.5 1,2-Dichloroethane	NI	A2, J. U	3.3	ug/kg dry	Volatil B18E111	e Organic Con 05/15/18	1 pounds by 05/16/18	EPA Method 8260C 8260C
Trichloroethene	NI	A2, J, Q4, U	1 5 3.3	**	**	"		8260C
1,2-Dichloropropane	NI	A2, J, U	3.3	**	**	"	••	8260C
Bromodichloromethane	N	A2, J, U	3.3	61		"		8260C
cis-1,3-Dichloropropene	NI	A2, J, U	3.3	19	п	"		8260C
4-Methyl-2-pentanone (MIBK)	N	A2, J, Q4, U	汉 27	47	н	"	**	8260C
Toluene	NI	U, A2, J	3.3	14	17	17		8260C
trans-1,3-Dichloropropene	NI	A2, J, U	3.3	n	**	**		8260C
1,1,2-Trichloroethane	NI	A2, I, U	3.3	19	n	"	*	8260C
Tetrachloroethene	NI	U, ALJ	3.3	m		77	Ħ	8260C
1,3-Dichloropropane	NI	A2, J, U	3.3	п	"	"	11	8260C
2-Hexanone	NI	A2, J. U	27	19	19	"	**	8260C
Chlorodibromomethane	NI	U,ASJ	3.3	"	**	"	*1	8260C
1,2-Dibromoethane (EDB)	NI	A2, J, U	3.3	17	rt	77	14	8260C
Chlorobenzene	N	U, A2, I	3.3	**	п	11	77	8260C
Ethylbenzene	NI	U, A2, J	3.3		н	n	**	8260C
m&p-Xylene	NI	U, AL J	6.7	19	"	17	"	8260C
o-Xylene	NI	A2, J, U	3.3		"	11	77	8260C
Styrene	NI	U, A2, J	3.3	"		17	**	8260C
Bromoform	N	A2, J. U	3.3	"	11	57	**	8260C
1,1,2,2-Tetrachloroethane	NI	A2, LU	3.3	п	и	17	**	8260C
1,2,3-Trichloropropane	NI	ASJ, U	3.3	п	19	17	"	8260C
1,3-Dichlorobenzene	N) U, A2, J, Q4	3.3	"	**	"	58	8260C
1,4-Dichlorobenzene	N	A2, J, Q4, U	J 3.3		"	"	**	8260C
1,2-Dichlorobenzene	NI	A2, J, Q4, U	J 3.3	"	"	и	77	8260C
2.2-Dibromo-3-chloropropane	N		13	"	51	n	**	8260C
Surrogate: 1,2-Dichloroethane-d4		124 %	63-144°6		п	"	"	
Surrogate: Toluene-d8		91 %	86-111%		"	"	"	
Surrogate: 4-Bromofluorobenzene		93 %	81-110%		"	"	**	
Surrogate: 1,2-Dichlorobenzene-d4		106 %	75-112%6		<i>"</i>		<i>"</i>	
Sample 1D: R0-4-0.5 Phenol	NI	U, A2, J	5,200	n	Semivolatik B18E126	e Organic Com 05/21/18	pounds by 05/22/18	EPA Method 8270D 8270D
Bis(2-chloroethyl)ether	NI	U, A2, J	1,000	n	"	"	19	8270D
2-Chlorophenol	N	U, A2, J	5,200	14	n		17	8270D
1,3-Dichlorobenzene	NI	U, J, A2	1,000	75	**	и	19	8270D
1,4-Dichlorobenzene		U, A2, J	1,000	"	n	79	18	8270D

FR 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG;	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-04	,						S	oil - Sampl	ed: 05/14/18 16:2
Sample ID: Benzyl alcohol	R0-4-0.5		ND	U, A2, J	5,200	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 82701 8270D
1,2-Dichloroben	zene		ND	U, A2, J	1,000	**	**	11	**	8270D
2-Methylphenol			ND	U, A2,	5,200	et	"	Ţ	**	8270D
Bis(2-chloro-1-r	nethylethyl) ether		ND	U, A2, J	1,000	"	"		"	8270D
3&4-Methylpher	nol		ND	U, A2, J	5,200	"	"	99	н	8270D
N-Nitrosodiprop	ylamine		ND	U, AL J	1,000		"	17	*	8270D
lexachloroethar	ne		ND	U, AS J	1,000	"	и	48	"	8270D
Nitrobenzene			ND	U, AS J	1,000	"	"	*1		8270D
lsophorone			ND	U, AS J	1,000	"	"	**	"	8270D
2-Nitrophenol			ND	U, A2, J	5,200	н	"	17	**	8270D
2,4-Dimethylphe	enol		ND	U, A2, J	5,200	"	79	59	"	8270D
Bis(2-chloroetho	oxy)methane		ND	U, A2, J	1,000	"	"		**	8270D
2,4-Dichlorophe	enol		ND	U, A2, J	5,200	11	"	"	79	8270D
,2,4-Trichlorob	enzene		ND	U, AS J	1,000	"	"	50		8270D
Vaphthalene			ND	U, AS J	1,000	u	"	89	"	8270D
-Chloroaniline			ND	U, A2, J, Q4 U	5,200	"	"	99	**	8270D
iexachlorobutac	diene		ND	U, AS J	1.000	37	*	"	79	8270D
-Chloro-3-meth	nylphenol		ND	U, A2, J	5,200	"	"	89	1+	8270D
2-Methylnaphtha	alene		ND	U, A2, J	1,000	"	39	11	69	8270D
Hexachlorocyclo	opentadiene		ND	U, Q4, A2, J UJ	5,200	17	19	**		8270D
2,4,6-Trichlorop	henol		ND	U, A2, J	5,200		"	78	68	8270D
2,4,5-Trichlorop	henol		ND	U, A2, J	5,200	19	"	95		8270D
2-Chloronaphtha	alene		ND	U, A2, J	1,000	n	"	**	"	8270D
2-Nitroaniline			ND	U, A2, J	5,200	и	0	**	**	8270D
Dimethyl phthala	ate		ND	U, A2, J	1,000	"	"	84	*	8270D
2,6-Dinitrotoluer	ne		ND	U, A2, J	1,000	"	"	50	**	8270D
Acenaphthylene			ND	U, A2, J	1,000	"	"	**	**	8270D
8-Nitroaniline			ND	-U, A2, J, Q4 U.	5,200		"	ee	79	8270D
Acenaphthene			ND	U, A2, 1	1,000	"	n	۲e	**	8270D
4-Dinitropheno	ol		ND	U, A2, C3, U.	20,000	n	"	π	"	8270D
-Nitrophenol			ND	U, A2, J	5,200	π	"	п	**	8270D
Dibenzofuran			ND	U, A2, J	1,000	n	n	Π		8270D
2,4-Dinitrotoluer	ne		ND	U, A2, J	1,000	n	"	"	**	8270D
Diethyl phthalate	e		ND	U, A2, 1	1,000	"		79	**	8270D
luorene			ND	U, A2, J	1,000	"	12	17	**	8270D
-Chlorophenyl	phenyl ether		ND	U, A2, J	1,000	n	"	87	**	8270D

to 7/9/18



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab 1D: 1805029-04						Se	oil - Sampl	ed: 05/14/18 16:20
Sample ID: R0-4-0.5 4-Nitroaniline	מא		5,200	ug/kg dry	Semivolatile B18E126	Organic Con 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
4,6-Dinitro-2-methylphenol	ND	Q2 U, A2, J, Q4 U	J 5,200	"	"	۲	87	8270D
Diphenyl amine	ND	U, A2, J	1,000		"	**	60	8270D
4-Bromophenyl phenyl ether	ND	U, A2, J	1,000			77	18	8270D
Hexachlorobenzene	ND	U, A2, J	1,000	и	"	**		8270D
Pentachlorophenol	งบ		20,000	"	я	"	÷	8270D
Phenanthrene	570	A2, C1, J	1,000	н	**	**	74	8270D
Anthracene	NI	U, A2, J	1,000		"	**		8270D
Carbazole	ND	U, A2, J, Q4	J 1,000	**		**	**	8270D
Di-n-butyl phthalate	580	A2, CL J	1,000	"	**	**	19	8270D
Fluoranthene	1,300	NO 04	1,000	"	"	**	11	8270D
Pyrene	1,600	742 J	1,000	"	"	н		8270D
Butyl benzyl phthalate	18,000	742, J	1,000	17	"	19	62	8270D
Benzo(a)anthracene	604	72, C1, J	1,000	"	"	"	**	8270D
3,3'-Dichlorobenzidine	NU	+U, Q4, A2, J,	5,200	п	"		11	8270D
Chrysene	1,400	J, Q6, A2	1,000	"	n	"	**	8270D
Bis(2-ethylhexyl) phthalate	4,400	X 2, J	1,000	"	11	10	28	8270D
Di-n-octyl phthalate	NĐ	U, A2, C3, J, Q4 4J	1,000	"	"	"		8270D
Benzo(b)fluoranthene	1,400	A2, J	1,000			•	**	8270D
Benzo(k)fluoranthene	ND	U, A2, J, Q4 U	J 1,000	11	"	**	41	8270D
Benzo(a)pyrene	550	A2, CI J. 04.	1,000		н	**	11	8270D
Indeno(1,2,3-cd)pyrene	ND	U, A2, J, Q6 LK	1,000	"	**	**	11	8270D
Dibenz(a,h)anthracene	NĐ	U, A2, J, Q4 U	J 1,000	**	**	19	**	8270D
Benzo(g,h,i)perylene	880	Q4, Q6, A2,	1,000			**	**	8270D
Hexadecanoic acid	6,500	N TIC, J		"	"	**	**	8270D
Octadecanoic acid	4,100	N TIC, J		"	п	**	7 9	8270D
Surrogate: 2-Fluorophenol		98 %	20-111%		11	11	\$7	
Surrogate: Phenol-d5		95 %	20-111%		"	"	**	
Surrogate: 2-Chlorophenol-d4		98 %	20-121%		17	17	11	
Surrogate: 1,2-Dichlorobenzene-d4		90 %	20-136%		iz	"	"	
Surrogate: Nitrobenzene-d5		91 %	20-125%		"	**	11	
Surrogate: 2-Fluorobiphenyl		87 %	20-121%		**	12	n	
Surrogate: 2,4,6-Tribromophenol		116 %	20-146%		"	20	11	
Surrogate: Terphenyl-d14		126 %	20-131%		89	74	"	
Sample ID: R0-4-0.5 % Solids			1	%	Conventional Cl B18E135	emistry Para 05/23/18	meters by A 05/24/18	APHA/EPA Methods 3550C





United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	5/15/2018
Subject:	Analytical Testing Results - Project R18S51 SDG: 18108E
From:	Peter Husby, Director EPA Region 9 Laboratory EMD-3-1
То:	Eric Nuchims Emergency Response Section SFD-9-2

Attached are the results from the analysis of samples from the Bercovich Smelter April 2018 Removal Action project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Mercury by EPA method 7473

PAHs by GC/MS SIM

GC/FID

PCB Aroclors by GC/ECD

Metals by ICP PCB Aroclors by GC/ECD Percent Solids Semivolatile Organic Compounds by GC/MS Semivolatile Organic Compounds by GC/MS Extractable Petroleum Hydrocarbons by Extractable Petroleum Hydrocarbons by GC/FID Purgeable Petroleum Hydrocarbons by GC/FID Volatile Organic Compounds by GC/MS

Volatile Organic Compounds by GC/MS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action	75 Hawth	esponse Section orne Street co CA, 94105		18108E 05/15/18 12:22	
ANALYTICAL REPORT FOR SAMPLES Sample ID	Laboratory ID	Matrix	Date Collected	Date Received	
R0-1-0.5	1804031-01	Soil	04/18/18 09:05	04/18/18 13:34	
R0-2-0.5	1804031-02	Soil	04/18/18 09:15	04/18/18 13:34	
R0-3-0.5	1804031-03	Soil	04/18/18 09:30	04/18/18 13:34	
R0-4-0.5	1804031-04	Soil	04/18/18 10:30	04/18/18 13:34	

Work Order 1804031

TPH-DRO/ORO: The samples contain heavy hydrocarbon mixtures that are outside the range of this analysis. The nature of the samples necessitated dilutions for samples 1804031-01, -03, and -04. The surrogate spikes were diluted out and are not reported.

SVOCs: Matrix QC samples (MS/MSD) were prepared but not analyzed. The samples are highly contaminated with heavy hydrocarbons which necessitated dilutions that would render the MS/MSD results meaningless.



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-01							So	oil - Sampl	ed: 04/18/18 09:05
Sample ID:	R0-1-0.5									7000 Series Methods
Mercury			0.39		0.16	mg/kg dry "	B18D127	04/26/18	04/26/18	7473
Arsenic			17		3		B18D103	04/23/18	05/01/18	6010C
Barium Cadmium			250		7.4 0.74			"		6010C 6010C
Chromium			1.9 76		1.5	"		"		6010C
Lead			220		4.4	"		"		6010C
Selenium			ND	U	3	"		"		6010C
Silver			ND		1.5	"	"	"		6010C
Sample ID:	D0 1 0 5		ND	_	1.5					
-	R0-1-0.5 e Range Organics		9.7	F13	8.2	"	B18D111	Purg 04/18/18	eable Petro 04/24/18	leum Hydrocarbons 8015C
Surrogate: a,a,	a-Trifluorotoluene			86 %	76-124%		"	"	"	
Sample ID:	R0-1-0.5							Extra	ctable Petro	leum Hydrocarbons
TPH - Diesel R	ange Organics		490	F13	37	"	B18D099	04/20/18	04/24/18	8015C
TPH - Oil Rang	ge Organics		3,900	F5	150	"	"	"	"	8015C
Sample ID:	R0-1-0.5						Poly	chlorinated B	iphenyls by	EPA Method 8082A
Aroclor 1016			ND	U	19	ug/kg dry	B18D129	04/27/18	05/04/18	8082A
Aroclor 1221			ND	U	40	"	"	"		8082A
Aroclor 1232			ND	U	19	"	"	"	"	8082A
Aroclor 1242			ND	U	19	"	"	"		8082A
Aroclor 1248			ND	U	19	"	"	"		8082A
Aroclor 1254			ND	U	19	"	"	"		8082A
Aroclor-1260			18	C1, G1, J	19	"	"	"		8082A
Aroclor 1262			ND	U	19	"	"	"		8082A
Aroclor 1268			ND	U	19	"	"	"		8082A
Surrogate: Tetr	achloro-m-xylene			55 %	20-140%		"	"	"	
Surrogate: Dec	eachlorobiphenyl			45 %	20-125%		"	"	"	
Sample ID:	R0-1-0.5						Volatile	e Organic Con	npounds by	EPA Method 8260C
Dichlorodifluo	romethane		ND	U	4.7	"	B18D145	04/18/18	04/30/18	
Chloromethane	:		ND	U	4.7	"	"	"		8260C
Vinyl chloride			ND	U	4.7	"	"	"		8260C
Bromomethane	:		ND	C3, J, U	4.7	"	"	"		8260C
Chloroethane			ND	U	4.7	"	"	"		8260C
Trichlorofluoro	methane		ND	U	4.7	"	"	"		8260C
1,1-Dichloroetl	nene		ND	U	4.7	"	"	"		8260C
·	-1,2,2-trifluoroethane		ND		4.7	"	"	"		8260C
Acetone	, <u>,_</u>		30		4.7	"	"	"		8260C
	le		50	01,5	51					02000



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-01							S	oil - Sampl	ed: 04/18/18 09:05
Sample ID:	R0-1-0.5									EPA Method 8260C
Dichlorometha			ND	U	4.7	ug/kg dry	B18D145	04/18/18	04/30/18	8260C
trans-1,2-Dichl			ND		4.7	"	"	"	"	8260C
tert-Butyl meth	yl ether (MTBE)		ND	U	19	"	"	"	"	8260C
1,1-Dichloroetl	hane		ND	U	4.7	"	"	"	"	8260C
cis-1,2-Dichlor	oethene		ND	U	4.7	"	"	"	"	8260C
2-Butanone (M	IEK)		ND	U	37	"	"	"	"	8260C
Chloroform			ND	U	4.7	"	"	"	"	8260C
1,1,1-Trichloro	ethane		ND	U	4.7	"	"	"	"	8260C
Carbon tetrach	loride		ND	U	4.7		"	"	"	8260C
1,1-Dichloropr	opene		ND	U	4.7	"	"	"	"	8260C
Benzene			ND	J, Q7, U	4.7	"	"	"	"	8260C
1,2-Dichloroetl	hane		ND	U	4.7	"	"	"	"	8260C
Trichloroethen	e		ND	U	4.7	"	"	"	"	8260C
1,2-Dichloropr	opane		ND	U	4.7	"	"	"	"	8260C
Bromodichloro	omethane		ND	C3, J, U	4.7	"	"	"	"	8260C
cis-1,3-Dichlor	opropene		ND	C3, J, U	4.7		"	"	"	8260C
4-Methyl-2-per	ntanone (MIBK)		ND	Q1, J, Q7, U	37		"	"	"	8260C
Toluene			ND	Q1, J, Q7, U	4.7		"	"	"	8260C
trans-1,3-Dichl	oropropene		ND	C3, J, U	4.7	"	"	"	"	8260C
1,1,2-Trichloro	ethane		ND	Q7, J, U	4.7	"	"	"	"	8260C
Tetrachloroethe	ene		ND	Q1, J, Q7, U	4.7	"	"	"	"	8260C
1,3-Dichloropr	opane		ND	Q7, Q1, J, U	4.7	"	"	"	"	8260C
2-Hexanone			ND	Q7, Q1, J, U	37	"	"	"	"	8260C
Chlorodibrome	omethane		ND	C3, Q1, Q7,	4.7	"	"	"	"	8260C
1,2-Dibromoet	hane (FDB)		ND	J, U Q7, Q1, J, U	47		"			8260C
Chlorobenzene			ND	Q1, Q7, J, U	4.7		"		"	8260C
Ethylbenzene	•		ND		4.7		"			8260C
m&p-Xylene				Q1, Q7, J, O C1, Q1, J, Q7	4.7 9.4		"			8260C
o-Xylene				Q1, J, Q7, U	4.7		"			8260C
Styrene				J, Q1, Q7, U	4.7		"		"	8260C
Bromoform				C3, Q1, Q7, O	4.7		"			8260C
				J, U	4./					
1,1,2,2-Tetrach	loroethane		ND	Q7, Q1, J, U	4.7	"	"	"	"	8260C
1,2,3-Trichloro			ND		4.7	"	"	"	"	8260C
1,3-Dichlorobe	enzene		ND		4.7	"	"	"	"	8260C
1,4-Dichlorobe	enzene		ND	Q7, Q1, J, U	4.7		"	"	"	8260C
1,2-Dichlorobe	enzene		ND	Q7, Q1, J, U	4.7	"	"	"	"	8260C



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-01							s	oil - Sampl	ed: 04/18/18 09:05
Sample ID: R0-1-0.5 1,2-Dibromo-3-chloropropane		ND	Q7, C3, Q1, J, U	19	ug/kg dry	Volatile B18D145	e Organic Co 04/18/18	mpounds by 04/30/18	EPA Method 8260C 8260C
Ethanol		230	N TIC, J		"	"	"	"	8260C
Ethene, difluoro		10	N TIC, J		"	"		"	8260C
Propene, methyl		14	N TIC, J		"	"	"	"	8260C
Surrogate: 1,2-Dichloroethane-d4			111 %	63-144%		"	"	"	
Surrogate: Toluene-d8			117 %	86-111%		"	"	"	
Surrogate: 4-Bromofluorobenzene			79 %	81-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			57 %	75-112%		"	"	"	
Sample ID: R0-1-0.5									EPA Method 8270D
Phenol		ND	U	2,500	"	B18D112	04/23/18	05/07/18	8270D
Bis(2-chloroethyl)ether		ND	U	490	"	"	"	"	8270D
2-Chlorophenol		ND	U	2,500	"	"	"	"	8270D
1,3-Dichlorobenzene		ND	U	490	"	"		"	8270D
1,4-Dichlorobenzene		ND	U	490	"	"	"	"	8270D
Benzyl alcohol		ND	U	2,500	"	"	"	"	8270D
1,2-Dichlorobenzene		ND	U	490	"	"		"	8270D
2-Methylphenol		ND	U	2,500	"	"	"	"	8270D
Bis(2-chloro-1-methylethyl) ether		ND	U	490	"	"	"	"	8270D
3&4-Methylphenol		ND	U	2,500	"	"		"	8270D
N-Nitrosodipropylamine		ND	U	490	"	"	"	"	8270D
Hexachloroethane		ND	U	490	"	"		"	8270D
Nitrobenzene		ND	U	490	"	"		"	8270D
Isophorone		ND	U	490	"	"	"	"	8270D
2-Nitrophenol		ND	U	2,500	"	"		"	8270D
2,4-Dimethylphenol		ND	J, Q2, U	2,500	"	"		"	8270D
Bis(2-chloroethoxy)methane		ND	U	490		"		"	8270D
2,4-Dichlorophenol		ND	U	2,500		"		"	8270D
1,2,4-Trichlorobenzene		ND	U	490		"		"	8270D
Naphthalene		ND		490		"	"	"	8270D
4-Chloroaniline		ND		2,500		"	"	"	8270D
Hexachlorobutadiene		ND		490	"	"	"	"	8270D
4-Chloro-3-methylphenol		ND		2,500		"		"	8270D
2-Methylnaphthalene		ND		490		"		"	8270D
Hexachlorocyclopentadiene		ND		2,500		"		"	8270D
2,4,6-Trichlorophenol		ND		2,500		"		"	8270D
2,4,5-Trichlorophenol		ND				"		"	8270D 8270D
2, 1 ,5-11011010p110101		ND	0	2,500					02/01



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street

San Francisco CA, 94105

SDG: 18108E **Reported:** 05/15/18 12:22

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-01						S	oil - Sample	ed: 04/18/18 09:05
Sample ID: R0-1-0.5					Semivolatile	e Organic Cor	npounds by	EPA Method 8270D
2-Chloronaphthalene	ND	U	490	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
2-Nitroaniline	ND	U	2,500	"	"	"	"	8270D
Dimethyl phthalate	ND	U	490	"	"	"	"	8270D
2,6-Dinitrotoluene	ND	U	490	"	"	"	"	8270D
Acenaphthylene	ND	U	490	"	"	"		8270D
3-Nitroaniline	ND	U	2,500	"	"	"	"	8270D
Acenaphthene	ND	U	490	"	"	"	"	8270D
2,4-Dinitrophenol	ND	C3, J, U	10,000	"	"	"		8270D
4-Nitrophenol	ND	U	2,500	"	"	"		8270D
Dibenzofuran	ND	U	490	"	"	"		8270D
2,4-Dinitrotoluene	ND	U	490	"	"	"		8270D
Diethyl phthalate	ND	U	490	"	"	"		8270D
Fluorene	ND	U	490	"				8270D
4-Chlorophenyl phenyl ether	ND	U	490	"	"			8270D
4-Nitroaniline	ND	J, Q2, U	2,500	"	"	"		8270D
4,6-Dinitro-2-methylphenol	ND		2,500	"				8270D
Diphenyl amine	ND		490	"				8270D
4-Bromophenyl phenyl ether	ND		490	"				8270D
Hexachlorobenzene	ND		490					8270D
Pentachlorophenol	ND		10,000					8270D
Phenanthrene	290		490	"				8270D
Anthracene	200 ND		490	"				8270D
Carbazole	ND		490					8270D
Di-n-butyl phthalate	ND		490	"	"			8270D
Fluoranthene	360		490 490					8270D
Pyrene	540		490	"				8270D
Butyl benzyl phthalate	570		490	"				8270D
Benzo(a)anthracene	ND	U	490	"				8270D
3,3'-Dichlorobenzidine	ND	C4, J, Q2, U	490	"	"	"		8270D
Chrysene	680		490	"	"			8270D
Bis(2-ethylhexyl) phthalate	8,000		490	"	"	"		8270D
Di-n-octyl phthalate		J, Q2, Q3, U	490	"	"			8270D
Benzo(b)fluoranthene	600		490	"	"			8270D
Benzo(k)fluoranthene		C1, J	490	"	"			8270D
Benzo(a)pyrene		U	490	"	"			8270D
Indeno(1,2,3-cd)pyrene	ND	U	490	"	"	"		8270D
Dibenz(a,h)anthracene	ND	U	490	"				8270D



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Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-01							S	oil - Sampl	led: 04/18/18 09:05
Sample ID:	R0-1-0.5						Semivolatil	e Organic Co	npounds by	EPA Method 8270D
Benzo(g,h,i)pe	erylene			C1, J	490	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
Benzenedicarb	ooxylic acid, diis		29,000	N TIC, J		"		"	"	8270D
Hexadecanoic	acid		2,300	N TIC, J		"		"	"	8270D
Octacosane			13,000	N TIC, J		"	"	"	"	8270D
Surrogate: 2-F	Fluorophenol			74 %	20-111%		"	"	"	
Surrogate: Phe	enol-d5			80 %	20-111%		"	"	"	
Surrogate: 2-C	Chlorophenol-d4			81 %	20-121%		"	"	"	
Surrogate: 1,2	-Dichlorobenzene-d4			67 %	20-136%		"	"	"	
Surrogate: Nit	robenzene-d5			78 %	20-125%		"	"	"	
Surrogate: 2-F	Fluorobiphenyl			72 %	20-121%		"	"	"	
Surrogate: 2,4	,6-Tribromophenol			93 %	20-146%		"	"	"	
Surrogate: Ter	phenyl-d14			75 %	20-131%		"	"	"	
Sample ID: % Solids	R0-1-0.5		68		1	%	Conventional C B18D123	Chemistry Para 04/25/18	ameters by 2 04/26/18	APHA/EPA Methods 3550C
Lab ID:	1804031-02							S	oil - Sampl	led: 04/18/18 09:15
Sample ID:	R0-2-0.5							Metals by	v EPA 6000/	7000 Series Methods
Mercury			0.19	C1, J	0.20	mg/kg dry	B18D127	04/26/18	04/26/18	7473
Arsenic			11		2.2	"	B18D103	04/23/18	05/01/18	6010C
Barium			250		5.6	"	"	"	"	6010C
Cadmium			2.5		0.56	"	"	"	"	6010C
Chromium			55		1.1	"	"	"	"	6010C
Lead			250	J, Q4	3.3	"	"	"	"	6010C
Selenium			ND	U	2.2	"	"	"	"	6010C
Silver			ND	U	1.1		"	"	"	6010C
Sample ID:	R0-2-0.5							Pur	geable Petro	leum Hydrocarbons
TPH - Gasolin	e Range Organics		ND	U	9.9	"	B18D111	04/18/18	04/24/18	8015C
Surrogate: a,a	a-Trifluorotoluene			88 %	76-124%		"	"	"	
Sample ID:	R0-2-0.5							Extra	ctable Petro	leum Hydrocarbons
TPH - Diesel F	Range Organics	RE1	160	F13	33	"	B18D138	04/20/18	05/01/18	-
TPH - Oil Ran	age Organics	RE1	1,900	F5	130	"	"	"	"	8015C
Surrogate: He:	xacosane	REI		26 %	20-111%		"	"	"	
Sample ID:	R0-2-0.5									EPA Method 8082A
Aroclor 1016			ND	U	15	ug/kg dry	B18D129	04/27/18	05/04/18	8082A
Aroclor 1221			ND	U	30	"	"	"	"	8082A
Aroclor 1232			ND	U	15	"	"	"	"	8082A
Aroclor 1242			ND	U	15		"	"	"	8082A
Aroclor 1248				U	15		"	"	"	8082A
Aroclor 1254				U	15		"	"		8082A
1234			IND		15					0002A



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Fax:(510) 412-2302

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-02							S	oil - Sampl	ed: 04/18/18 09:15
Sample ID: Aroclor-1260	R0-2-0.5		19		15	ug/kg dry	Pol: B18D129	vchlorinated E 04/27/18	Biphenyls by 05/04/18	EPA Method 8082A 8082A
Aroclor 1262			ND	U	15	"	"	"	"	8082A
Aroclor 1268			ND	U	15		"	"	"	8082A
Surrogate: Tetro	achloro-m-xylene			62 %	20-140%		"	"	"	
Surrogate: Deco	achlorobiphenyl			49 %	20-125%		"	"	"	
Sample ID:	R0-2-0.5						Volati	e Organic Co	mpounds by	EPA Method 8260C
Dichlorodifluor	omethane		ND	Q7, J, Q4, U	2.8	"	B18D145	04/18/18	05/01/18	8260C
Chloromethane			ND	Q7, J, U	2.8	"	"	"	"	8260C
Vinyl chloride			ND	J, Q7, U	2.8	"	"	"	"	8260C
Bromomethane			ND	J, C3, Q7, Q4, Q6, U	2.8	"	"	"	"	8260C
Chloroethane			ND	J, Q7, U	2.8	"	"	"	"	8260C
Trichlorofluoro	methane		ND	J, Q7, Q4, U	2.8	"	"	"	"	8260C
1,1-Dichloroeth	lene		ND	Q7, J, Q4, U	2.8	"	"	"	"	8260C
1,1,2-Trichloro-	1,2,2-trifluoroethane		ND	Q7, Q4, J, U	2.8	"	"	"	"	8260C
Acetone			11	Q7, J, C1, Q6, Q4	22	"	"	"	"	8260C
Carbon disulfid	e		ND	J, C3, Q7, Q4, U	2.8	"	"	"	"	8260C
Dichloromethar	ne		ND	Q7, J, U	2.8	"	"	"	"	8260C
trans-1,2-Dichlo	proethene		ND	J, Q7, Q4, U	2.8		"	"	"	8260C
tert-Butyl methy	yl ether (MTBE)		ND	J, Q7, U	11	"	"	"	"	8260C
1,1-Dichloroeth	ane		ND	Q7, J, U	2.8	"	"	"	"	8260C
cis-1,2-Dichloro	pethene		ND	Q7, J, Q4, U	2.8	"	"	"	"	8260C
2-Butanone (MI	EK)		ND	Q7, J, Q4, Q6, U	22	"	"	"	"	8260C
Chloroform			ND	J, Q7, U	2.8	"	"	"	"	8260C
1,1,1-Trichloroe	ethane		ND	Q7, Q4, J, U	2.8	"	"	"	"	8260C
Carbon tetrachle	oride		ND	J, Q7, Q4, U	2.8	"	"	"	"	8260C
1,1-Dichloropro	opene		ND	Q7, J, Q4, U	2.8	"	"	"	"	8260C
Benzene			ND	Q7, J, U	2.8	"	"	"	"	8260C
1,2-Dichloroeth	ane		ND	Q7, J, U	2.8	"	"	"	"	8260C
Trichloroethene	;		ND	J, Q7, Q4, U	2.8		"	"	"	8260C
1,2-Dichloropro	opane		ND	Q7, J, Q4, U	2.8	"	"	"	"	8260C
Bromodichloror	methane		ND	J, C3, Q7, Q4, U	2.8	"	"	"	"	8260C
cis-1,3-Dichloro	opropene		ND	C3, Q7, J, Q4, Q6, U	2.8	"	"	"	"	8260C
4-Methyl-2-pen	tanone (MIBK)		ND	J, Q1, Q7, Q4, Q6, U	22	"	"	"	"	8260C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

shore is intermediate intermediate is a state of the state of the state is intermediate intermediate is intermediate intermediate intermediate is intermediate intermediate intermediate is intermediate intermediate intermediate is intermediate inter	Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Falence No 0, 1, 0, 7, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	Lab ID: 1804031-02							S	oil - Sampl	ed: 04/18/18 09:15
biolene ord ord unam. L.D. biolhorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene (L.D. Teiblorgropene 	Sample ID: R0-2-0.5						Volatil	e Organic Coi	nnounds by	EPA Method 8260C
nane 1.5 Dicklongroupene in 1.5 C. 5, 7, 2, 8, 2, 8, 1, 1, 2, 7, 1, 2, 8, 1, 2, 1, 2, 7, 1, 2, 4, 0, 0, 0, 0, 0, 0, 0, 1, 0, 7, 2, 8, 1, 2, 7, 1, 2,	Toluene		ND		2.8	ug/kg dry				
Name of example in the second secon	tuona 1.2 Disklanannana			- ·	2.0	"			"	82600
1.1.3-TrickloreerhaneND1.0.7, U2.8"""%% 20001.3-DickloreerhaneND0.1, 0.7, U2.8"""%% 20001.3-DickloreerhaneND0.1, 0.7, U2.8"""%% 20001.3-DickloreerhaneND0.1, 0.7, U2.8"""%% 20001.4-DirectiberoerhaneND0.1, 0.7, U2.8"""% 800C1.2-DirectiberoerhaneND0.1, 0.7, U2.8"""% 800C1.2-DirectiberoerhaneND0.7, 0.1, 2.8"""% 820C1.3-DirectiberoerhaneND0.7, 0.1, 2.8"""% 820C1.3-DirectiberoerhaneND0.7, 0.1, 2.8"""% 820C1.3-DirectiberoerhaneND0.7, 0.1, 2.8"""% 820C1.3-DirectiberoerhaneND0.1, 0.7, 2.8"	trans-1,5-Diemoropropene		ND		2.8					8200C
Catal and activation and activation and activation and activation activatity actitation activation activation activation activation	1,1,2-Trichloroethane		ND		2.8	"		"	"	8260C
13.3Dekkloropropane ND 0,1,0,7, 0,1, 0,2, 0,2, 0,2,2,2,3,1,1,1,0,1,0,1,0,1,0,1,0,1,0,1,0,1,0,1	Tetrachloroethene		ND		2.8	"	"	"	"	8260C
Number of the sector of the	1 3-Dichloropropage		ND		20	"		"	"	8260C
Induction ID Q1, Q1, Q1, Q8 P P S 25000 2.birendibronmenthane ND Q1, Q1, Q8 P P S 25000 1.2.bitromoethane (EDB) ND Q1, Q7, Q8 P P S 25000 1.2.bitromoethane (EDB) ND Q1, Q7, Q8 P P S 25000 1.2.bitromoethane (EDB) ND Q1, Q1, Q8 P P S 25000 1.2.bitromoethane (EDB) ND Q1, Q1, Q8 P P S 25000 1.2.bitromoethane (EDB) ND Q1, Q1, Q8 P S 25000 S 25000 1.2.bitromoethane (EDB) ND Q1, Q1, Q8 P S 25000 S 25000 1.2.bitromoethane (EDB) ND Q1, Q7, Q8 P S 25000 S 25000 wikp-Xylene ND Q1, Q7, Q8 P S 25000 S 25000 ylane ND Q1, Q7, Q8 P S 25000 S 25000 1,1,2,2.Tetrachloroethane ND Q, Q6, Q6, Q6, Q6, Q4, Q6, Q6, Q6, Q4, Q6, Q6, Q6, Q4, Q6, Q6, Q6, Q4, Q6, Q4, Q6, Q4, Q6, Q6, Q4, Q6, Q4, Q6,						"			"	
Landom definition ND Q, N, Q, N <	2-riexanone		ND		22					8200C
12-Dibromethane (EDB) ND 01, 1 07, 04, 02, 03, 04, 02, 04, 04, 04, 04, 04, 04, 04, 04, 04, 04	Chlorodibromomethane		ND	Q7, J, Q1,	2.8	"	"	"	"	8260C
Optimized in the second sec	1.2-Dibromoethane (FDB)		ND		20	"		"	"	8260C
Introduction of the second	1,2-Dioromoeulane (EDD)		ND		2.8					02000
Bith Standard ND Q, T, Q, I, Q,	Chlorobenzene		ND		2.8	"	"	"	"	8260C
of 4 Uof 4	Ethylbenzene		ND		2.8	"		"		8260C
94, U 96 97, J, Q1, Q2, Q3 9 9 9 8260C Styrene ND Q1, J, Q7, Q2, Q3 P P P 8260C Aromoform ND Q7, J, Q1, Q2, Q3 P P P 8260C Aromoform ND J, Q1, Q7, Q2, Q3 P P P 8260C J, J, 27, Trichloropropane ND J, Q1, Q7, Q2, Q3 P P P 8260C J, 3-Dichlorobenzene ND J, Q1, Q7, Q2, Q3 P P P 8260C J, 40, U Q4, U P P P 8260C 9 P P 8260C J, 3-Dichlorobenzene ND J, J, Q7, Q2, Q3 P P P 8260C 9 P P 8260C 9 9 8260C 9 9 8260C 9 9 8260C 9 8260C 9 8260C 9 8260C 9 8260C 9 8260C 9	Langioenzene			Q4, U	2.0					02000
No $0, 1, 1, Q, 2, Q, Q,$	m&p-Xylene		ND		5.6	"	"	"	"	8260C
SilvenceQ4, U2.8""""S260C3romoformQ1, J, Q7, Q4, U2.8""""%\$260C3romoformQ7, J, Q1, Q4, Q4, Q6, U2.8"""%\$260C1,1,2,2-TetrachloroethaneNDJ, Q1, Q7, 	o-Xylene		ND		2.8	"		"	"	8260C
April Market ND Q1, Q2, Q2, Q4, Q6, Q4, Q7, Q4, Q6, Q4, Q7, Q4, Q4, Q4, Q4, Q4, Q4, Q4, Q4, Q4, Q4				Q4, U	210					
Brownoform ND Q7, J, Q1, C3, Q4, Q6, U 2.8 " " " " 8260C L1, L2, 2-Tetrachloroethane ND J, Q1, Q7, Q4, U 2.8 " " " 8260C L2, 3-Trichloropropane ND J, Q1, Q7, Q4, U 2.8 " " " 8260C L3, 3-Trichloropropane ND J, Q1, Q7, Q4, U 2.8 " " " 8260C L3, 3-Trichloropropane ND Q, L, Q7, Q4, U 2.8 " " " 8260C L3, 4Dichlorobenzene ND Q, L, Q7, Q4, U 2.8 " " " 8260C L4, 4Dichlorobenzene ND Q, L, Q7, Q4, U 2.8 " " " 8260C L2, 2-Dichloropenae ND Q, Q, U 2.8 " " " 8260C L2, 2-Dichloropenae ND Q, Q, U 2.8 " " " 8260C L2, 2-Dichloropenae ND J, Q, L, C3, LI 11 " " " 8260C Surrogate: 1,2-Dichlorobenzene I64 %<	Styrene		ND		2.8	"	"	"	"	8260C
1,1,2,2-Tetrachloroethane ND J, Q1, Q7, 2,8 " " " 8260C 1,2,3-Trichloropropane ND J, Q1, Q7, 2,8 " " " 8260C 1,3-Dichlorobenzene ND Q4, U " " " " 8260C 1,4-Dichlorobenzene ND Q1, Q7, 2,8 " " " 8260C 1,4-Dichlorobenzene ND Q1, Q7, 2,8 " " " 8260C 1,4-Dichlorobenzene ND Q1, Q7, 2,8 " " " 8260C 1,2-Dichlorobenzene ND Q1, Q7, 2,8 " " " 8260C 1,2-Dichlorobenzene ND Q1, Q7, Q,	Bromoform		ND		2.8	"		"	"	8260C
I,1,2,2-Tetrachloroethane ND J, Q1, Q7, Q4, U 2.8 " " " " 8260C $Q4, U$ $Q4, U$ " " " " 8260C $Q4, U$ $Q4, U$ " " " " 8260C $Q4, U$ $Q4, U$ " " " 8260C										
Q4, U Q4, U " " " % 260C Q4, U Q4, U " " " % 260C Q4, U Q4, U " " " % 260C Q4, U Q4, U " " " % 260C Q4, U Q4, U " " " % 260C Q4, U Q4, U " " " % 260C Q4, U Q1, Q7, Q,	1 1 2 2-Tetrachloroethane		ND		28	"		"	"	8260C
1,2,5-11 (hild/op/opane) ND Q1, J, Q7, Q.8 " " " % 2200C 1,3-Dichlorobenzene ND Q1, J, Q7, Q.8 " " " % 2200C Q4, U Q4, U Q4, U " " " % 2200C Q4, U Q4, U Q4, U " " " % 2200C Q4, U Q4, U Q4, U " " " % 2200C 1,2-Dichlorobenzene ND Q1, Q7, J, Q.8 " " " % 2200C Q4, U Q1, Q7, J, Q.8 " " " % 2200C % 2200C 1,2-Dichlorobenzene ND J, Q1, C3, 11 " " " % 2200C L2-Dichloroethane-d4 37 N TIC, J " " " % 2200C Surrogate: 1,2-Dichloroethane-d4 123 % 86-111% " " " " % 2200C Surrogate: 1,2-Dichloroethane-d4 56 % 75-112% " " " " % 2200C Surrogate: 1,2-Dichlorobenzene-d4 56 % 75-112% "	1,1,2,2 Tetraenioroemane		ND		2.8					02000
h,3-DichlorobenzeneNDQ1, J, Q7, Q4, U 2.8 """" $8260C$ I,4-DichlorobenzeneNDQ1, J, Q7, Q4, U 2.8 """" $8260C$ I,2-DichlorobenzeneNDQ1, Q7, J, Q4, U 2.8 """" $8260C$ I,2-DichlorobenzeneNDQ1, Q7, J, Q7, Q6, Q4, U 2.8 """" $8260C$ I,2-DichlorobenzeneNDJ, Q1, C3, Q7, Q6, Q4, U11""" $8260C$ I,2-Dichlorobenzene-d437N TIC, J"""" $8260C$ Surrogate: 1,2-Dichlorobenzene-d4123 % $86-111\%$ """" $8260C$ Surrogate: 1,2-Dichlorobenzene-d456 % $75-112\%$ """"" $8270D$ Sharpel ID:R0-2.0.5NDU $1,900$ "B18D112 $04/23/18$ $05/07/18$ $8270D$ PhenolNDU 370 """"% $8270D$	1,2,3-Trichloropropane		ND		2.8	"	"	"	"	8260C
Q4, U Q4, U Q4, U """"" \$260C Q4, U Q4, U Q4, U """""" \$260C Q4, U Q4, U """""" \$260C Q4, U Q4, U """"" \$260C Q4, U Q4, U """"" \$260C Q4, U Q4, U """" \$260C Q4, U Q4, U """" \$260C Q1, Q7, Q, Q4, U """" \$260C Q7, Q6, Q4, U """" " U U """" " Sturogate: 1,2-Dichloroethane-d4 164 % 63-144% """" " Sturogate: 1,2-Dichlorobenzene 164 % 63-144% """" " Sturogate: 1,2-Dichlorobenzene-d4 123 % 86-111% """" " Sturogate: 1,2-Dichlorobenzene-d4 56 % 75-112% """" " Sturogate: 1,2-Dichlorobenzene-d4 56 % 75-112% """" " Sturogate: 1,2-Dichlorobenzene-d4 56 % 75-112% """" " Sturogate: 1,2-Dichlorobenzene-d4 ND U 1,900 B18D112 04/23/18 05/07/18 <td>1,3-Dichlorobenzene</td> <td></td> <td>ND</td> <td></td> <td>2.8</td> <td>"</td> <td></td> <td>"</td> <td>"</td> <td>8260C</td>	1,3-Dichlorobenzene		ND		2.8	"		"	"	8260C
1,3-Dichlorobenzene ND Qi,)- 		112		2.0					
1,2-Dichlorobenzene ND Q1, Q7, J, Q.8 """"""""""""""""""""""""""""""""""""	1,4-Dichlorobenzene		ND		2.8	"	"	"	"	8260C
1,2-Dibromo-3-chloropropane ND J, Q1, C3, Q7, Q6, Q4, U, Q7, Q6, Q4, U, U " " " % 8260C Ethanol 37 N TIC, J " " " % 8260C Sturrogate: 1,2-Dichloroethane-d4 164 % 63-144% " " " % 8260C Sturrogate: 1,2-Dichloroethane-d4 164 % 63-144% " " " *	1,2-Dichlorobenzene		ND		2.8	"		"	"	8260C
ND J, Q1, C3, Q1, Q2, Q4, Q7, Q6, Q4, U """"""""""""""""""""""""""""""""""""				Q4, U						
U W " " " % 8260C Surrogate: 1,2-Dichloroethane-d4 164 % 63-144% " " " " " 8260C Surrogate: 1,2-Dichloroethane-d4 123 % 86-111% " <t< td=""><td>1,2-Dibromo-3-chloropropane</td><td></td><td>ND</td><td></td><td>11</td><td>"</td><td>"</td><td>"</td><td>"</td><td>8260C</td></t<>	1,2-Dibromo-3-chloropropane		ND		11	"	"	"	"	8260C
Surrogate: 1,2-Dichloroethane-d4 "										
Nurrogate: 1,2-Dichlorobeniane-a4 104 % 05-144% Surrogate: 70 % 86-111% " " Surrogate: 4.8 % 86-111% " " Surrogate: 4.8 % 86-111% " " Surrogate: 4.8 % 86-111% " " Surrogate: 4.9 % 81-110% " " Surrogate: 1,2-Dichlorobenzene-d4 56 % 75-112% " " Sample ID: R0-2-0.5 Semivolatile Organic Compounds by EPA Method 8270 Phenol ND U 1,900 " B18D112 04/23/18 05/07/18 8270D Bis(2-chloroethyl)ether ND U 370<"	Ethanol		37	N TIC, J		"	"	"	"	8260C
Surrogate: Toluene-d8 123 % 86-111% " " " " " Surrogate: Toluene-d8 79 % 81-110% " " " " " Surrogate: 1,2-Dichlorobenzene 79 % 81-110% " " " " Surrogate: 1,2-Dichlorobenzene-d4 56 % 75-112% " " " " " Surrogate: 1,2-Dichlorobenzene-d4 56 % 75-112% " " " " Surrogate: 1,2-Dichlorobenzene-d4 ND U 1,900 " Bl8D112 04/23/18 05/07/18 8270D Phenol ND U 370 " " " " 8270D " " 8270D	Surrogate: 1,2-Dichloroethane-d-	4		164 %	63-144%		"	"	"	
Surrogate: 4-Bromofluorobenzene 79 % 81-110% "	Surrogate: Toluene-d8						"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4 56 % 75-112% " " " " " " Sample ID: R0-2-0.5 Semivolatile Organic Compounds by EPA Method 8270 Phenol ND U 1,900 B18D112 04/23/18 05/07/18 8270D Bis(2-chloroethyl)ether ND U 370 " " " " 8270D	-	е					"	"	"	
Phenol ND U 1,900 B18D112 04/23/18 05/07/18 8270D Bis(2-chloroethyl)ether ND U 370 " " " 8270D	Surrogate: 1,2-Dichlorobenzene-	d4		56 %	75-112%		"	"	"	
Phenol ND U 1,900 B18D112 04/23/18 05/07/18 8270D Bis(2-chloroethyl)ether ND U 370 " " " 8270D	Sample ID: R0-2-0.5						Semivolatil	e Organic Co	nnounds by	EPA Method 8270D
	Phenol		ND	U	1,900	"				
	Bis(2-chloroethyl)ether		ND	U	370	"	"	"	"	8270D
2-Chlorophenol ND U 1.900 " " " 8270D	2-Chlorophenol				1,900	"	"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action (-----

Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

 SDG:
 18108E

 Reported:
 05/15/18 12:22

Analyte		Reanalysis / Extract F		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-02							Se	oil - Sampl	ed: 04/18/18 09:15
Sample ID:	R0-2-0.5									EPA Method 8270D
1,3-Dichlorober			ND		370	ug/kg dry "	B18D112	04/23/18	05/07/18	8270D
1,4-Dichlorober	nzene		ND	U	370		"			8270D
Benzyl alcohol			ND		1,900		"			8270D
1,2-Dichlorober			ND		370		"			8270D
2-Methylphenol			ND	U	1,900		"			8270D
	methylethyl) ether		ND		370	"	"			8270D
3&4-Methylphe			ND		1,900		"			8270D
N-Nitrosodiproj			ND	U	370		"			8270D
Hexachloroetha	ine		ND		370		"			8270D
Nitrobenzene			ND		370		"			8270D
Isophorone			ND	U	370		"			8270D
2-Nitrophenol			ND		1,900		"			8270D
2,4-Dimethylph				J, Q2, U	1,900		"			8270D
Bis(2-chloroeth			ND	U	370		"			8270D
2,4-Dichlorophe			ND		1,900		"			8270D
1,2,4-Trichlorob	penzene		ND		370		"			8270D
Naphthalene			ND	U	370		"			8270D
4-Chloroaniline			ND		1,900		"			8270D
Hexachlorobuta			ND		370	"	"			8270D
4-Chloro-3-met			ND	U	1,900	"	"		"	8270D
2-Methylnaphth			ND		370	"			"	8270D
Hexachlorocycl	-		ND		1,900	"	"	"	"	8270D
2,4,6-Trichlorop			ND	U	1,900	"	"	"	"	8270D
2,4,5-Trichlorop			ND		1,900	"				8270D
2-Chloronaphth	alene		ND		370	"	"	"	"	8270D
2-Nitroaniline			ND	U	1,900	"	"		"	8270D
Dimethyl phtha			ND		370	"		"	"	8270D
2,6-Dinitrotolue			ND		370	"	"	"		8270D
Acenaphthylene	2		ND		370	"	"	"		8270D
3-Nitroaniline			ND		1,900	"	"	"		8270D
Acenaphthene			ND		370	"	"	"	"	8270D
2,4-Dinitrophen	ol			U, C3, J	7,600	"	"	"	"	8270D
4-Nitrophenol			ND		1,900	"	"	"		8270D
Dibenzofuran			ND		370	"	"	"		8270D
2,4-Dinitrotolue			ND		370	"	"	"		8270D
Diethyl phthalat	te		ND	U	370	"	"	"		8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Sample Results

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-02							S	oil - Sampl	ed: 04/18/18 09:15
Sample ID: Fluorene	R0-2-0.5		ND	U	370	ug/kg dry	Semivolatil B18D112	e Organic Cor 04/23/18	mpounds by 05/07/18	EPA Method 8270D 8270D
4-Chlorophenyl	phenyl ether		ND	U	370	"	"	"	"	8270D
4-Nitroaniline			ND	J, Q2, U	1,900	"	"	"	"	8270D
4,6-Dinitro-2-m	ethylphenol		ND	C3, J, U	1,900	"	"	"	"	8270D
Diphenyl amine	;		ND		370	"	"	"	"	8270D
4-Bromophenyl			ND		370		"	"		8270D
Hexachlorobenz			ND		370		"	"	"	8270D
Pentachlorophe							"	"		8270D
-	lioi		ND	0, 03, 1	7,600 370			"		
Phenanthrene			380	II			"	"		8270D 8270D
Anthracene			ND		370			"		
Carbazole	_		ND		370					8270D
Di-n-butyl phth	alate		ND	U	370	"			"	8270D
Fluoranthene			570		370	"	"	"	"	8270D
Pyrene			730		370	"		"	"	8270D
Butyl benzyl ph			2,600		370	"	"	"	"	8270D
Benzo(a)anthra			260	C1, J	370	"		"	"	8270D
3,3'-Dichlorobe	nzidine		ND	C4, J, Q2, U	370					8270D
Chrysene			800		370	"		"	"	8270D
Bis(2-ethylhexy			1,800		370	"			"	8270D
Di-n-octyl phth			ND	J, Q2, Q3, U	370					8270D
Benzo(b)fluora			940		370	"	"	"	"	8270D
Benzo(k)fluora			240	C1, J	370	"		"	"	8270D
Benzo(a)pyrene			310	C1, J	370			"	"	8270D
Indeno(1,2,3-cd			200	C1, J	370					8270D
Dibenz(a,h)anth			ND	U	370					8270D
Benzo(g,h,i)per			420	NEG	370	"		"	"	8270D
Hentriacontane				N TIC, J						8270D
Hexadecanoic a Sitosterol	cid		4,500 7 300	N TIC, J N TIC, J		"		"	"	8270D 8270D
			1,000		20 1110/		"	,,	"	
Surrogate: 2-Fl	-			84 %	20-111%		,,	,,		
Surrogate: Pher				88 % 88 %	20-111% 20-121%			"	"	
Surrogate: 2-Cl	iloropnenoi-a4 Dichlorobenzene-d4			88 % 73 %	20-121% 20-136%		"	"	,,	
Surrogate: 1,2-1 Surrogate: Nitro				73 % 81 %	20-136% 20-125%		"	"	"	
Surrogate: Nuro Surrogate: 2-Fl				81 % 78 %	20-123%		"	"	"	
	6-Tribromophenol			101 %	20-12178		"	"	"	
Surrogate: 2,4,0 Surrogate: Terp				95 %	20-140%		"	"	"	

Sample ID: R0-2-0.5

Conventional Chemistry Parameters by APHA/EPA Methods



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1	804031-02							S	oil - Sampl	ed: 04/18/18 09:1
Sample ID: R % Solids	0-2-0.5		90		1	%	Conventional C B18D123	Chemistry Par 04/25/18	ameters by A 04/26/18	APHA/EPA Method 3550C
Lab ID: 18	804031-03							S	oil - Sampl	ed: 04/18/18 09:3
Sample ID: R	0-3-0.5							Metals by	v EPA 6000/	7000 Series Method
Mercury		RE1	0.40		0.032	mg/kg dry	B18D127	04/26/18	04/26/18	7473
Arsenic			15		2.9	"	B18D103	04/23/18	05/01/18	6010C
Barium			220		7.2	"	"	"	"	6010C
Cadmium			3.2		0.72	"	"	"	"	6010C
Chromium			58		1.4	"	"	"	"	6010C
lead			340		4.3	"	"	"	"	6010C
Selenium			ND	U	2.9	"	"	"	"	6010C
Silver			ND	U	1.4	"	"	"	"	6010C
Sample ID: R FPH - Gasoline Ran	0-3-0.5 ge Organics		ND	U	6.8	"	B18D111	Pur 04/18/18	geable Petro 04/24/18	leum Hydrocarbon 8015C
Surrogate: a,a,a-Trij	fluorotoluene			87 %	76-124%		"	"	"	
-	0-3-0.5									leum Hydrocarbor
TPH - Diesel Range	-		98		36	"	B18D099	04/20/18	04/24/18	8015C
TPH - Oil Range Or	ganics		860	F5	140	"	"	"	"	8015C
	0-3-0.5			T		4 1				EPA Method 8082
Aroclor 1016			ND		19	ug/kg dry	B18D129	04/27/18	05/04/18	8082A
Aroclor 1221			ND	U	39	"	"	"	"	8082A
Aroclor 1232			ND	U	19	"	"	"	"	8082A
Aroclor 1242			ND	U	19	"	"	"	"	8082A
Aroclor 1248			ND	U	19	"	"	"	"	8082A
Aroclor 1254			ND	U	19	"	"	"	"	8082A
Aroclor-1260			15	C1, J	19	"	"	"	"	8082A
Aroclor 1262			ND	U	19		"	"	"	8082A
Aroclor 1268			ND	U	19	"	"	"	"	8082A
Surrogate: Tetrachlo	oro-m-xylene			46 %	20-140%		"	"	"	
Surrogate: Decachlo	orobiphenyl			36 %	20-125%		"	"	"	
Sample ID: R	0-3-0.5						Volati	le Organic Co	mpounds bv	EPA Method 8260
Dichlorodifluoromet	thane		ND	U	4	"	B18D145	04/18/18	04/30/18	
Chloromethane			ND	U	4	"	"	"	"	8260C
/inyl chloride			ND	U	4	"	"	"	"	8260C
Bromomethane			ND	C3, J, U	4	"	"	"	"	8260C
Chloroethane			ND	U	4	"	"	"	"	8260C
richlorofluorometh	ane		ND	U	4		"	"	"	8260C
,1-Dichloroethene			ND						"	8260C



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105
 SDG:
 18108E

 Reported:
 05/15/18 12:22

Analyte		Reanalysis / Extract Rest		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-03							Se	oil - Sample	ed: 04/18/18 09:30
Sample ID: 1,1,2-Trichloro	R0-3-0.5 -1,2,2-trifluoroethane		ND	U	4	ug/kg dry	Volatile B18D145	Organic Cor 04/18/18	npounds by 04/30/18	EPA Method 8260C 8260C
Acetone			900		32	"	"	"	"	8260C
Carbon disulfid	le		ND	C3, J, U	4	"	"	"	"	8260C
Dichlorometha	ne		ND	U	4	"	"	"		8260C
trans-1,2-Dichl	oroethene		ND	U	4	"	"	"		8260C
tert-Butyl meth	yl ether (MTBE)		ND	U	16	"	"	"	"	8260C
1,1-Dichloroeth	nane		ND	U	4	"	"	"	"	8260C
cis-1,2-Dichlor	oethene		ND	U	4	"	"	"	"	8260C
2-Butanone (M	EK)		67		32	"	"	"	"	8260C
Chloroform			ND	U	4	"	"	"	"	8260C
1,1,1-Trichloro	ethane		ND	U	4	"	"	"	"	8260C
Carbon tetrachl	oride		ND	U	4	"	"	"	"	8260C
1,1-Dichloropro	opene		ND	U	4	"	"	"		8260C
Benzene			ND	J, Q7, U	4	"	"	"	"	8260C
1,2-Dichloroeth	nane		ND	U	4	"	"	"	"	8260C
Trichloroethene	e		ND	U	4	"	"	"	"	8260C
1,2-Dichloropro	opane		ND	U	4	"	"	"	"	8260C
Bromodichloro	methane		ND	C3, J, U	4	"	"	"	"	8260C
cis-1,3-Dichlor	opropene		ND	J, C3, U	4	"	"	"	"	8260C
4-Methyl-2-per	ntanone (MIBK)		ND	Q1, J, Q7, U	32	"	"	"	"	8260C
Toluene			ND	Q1, U, J, Q7	4	"	"	"	"	8260C
trans-1,3-Dichle	oropropene		ND	J, C3, U	4	"	"	"		8260C
1,1,2-Trichloro	ethane		ND	U, J, Q7	4	"	"	"		8260C
Tetrachloroethe	ene		ND	U, Q1, J, Q7	4	"	"	"		8260C
1,3-Dichloropro	opane		ND	Q1, J, Q7, U	4		"	"		8260C
2-Hexanone			ND	Q1, J, Q7, U	32	"	"	"		8260C
Chlorodibromo	methane		ND	Q1, J, C3, Q7, U	4	"	"	"	"	8260C
1,2-Dibromoeth	nane (EDB)		ND	J, Q1, Q7, U	4	"	"	"		8260C
Chlorobenzene			ND	U, Q1, J, Q7	4	"	"	"		8260C
Ethylbenzene			ND	J, Q1, Q7, U	4	"	"	"	"	8260C
m&p-Xylene			4.3	J, C1, Q1, Q7	8	"	"	"		8260C
o-Xylene			ND	J, Q1, Q7, U	4	"	"	"		8260C
Styrene			ND	U, Q1, J, Q7	4		"	"		8260C
Bromoform			ND	Q1, J, C3,	4		"	"		8260C
1,1,2,2-Tetrach	loroethane		ND	Q7, U J, Q7, Q1, U	A		"			8260C
					4			"		8260C 8260C
1,2,3-Trichloro	propane		IND	J, Q1, Q7, U	4					0200C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-03							S	oil - Sampl	ed: 04/18/18 09:30
Sample ID:	R0-3-0.5						Volatile	Organic Cor	npounds by	EPA Method 8260C
1,3-Dichlorober	nzene		ND	Q1, J, Q7, U	4	ug/kg dry	B18D145	04/18/18	04/30/18	8260C
1,4-Dichlorober	nzene		ND	Q1, J, Q7, U	4	"	"	"	"	8260C
1,2-Dichlorober	nzene		ND	J, Q1, Q7, U	4	"	"	"	"	8260C
1,2-Dibromo-3-	chloropropane		ND	J, Q1, C3, Q7, U	16	"	"	"	"	8260C
Ethanol			510	Q7, U N TIC, J		"	"	"	"	8260C
Isopropyl Alcoh	ol		82	N TIC, J		"	"	"	"	8260C
Octanone			300	N TIC, J		"	"	"	"	8260C
Octene			52	N TIC, J		"	"	"	"	8260C
Propene, methy	1		8.4	N TIC, J		"	"	"	"	8260C
Surrogate: 1,2-1	Dichloroethane-d4			108 %	63-144%		"	"	"	
Surrogate: Tolu	ene-d8			119 %	86-111%		"	"	"	
Surrogate: 4-Br	romofluorobenzene			77 %	81-110%		"	"	"	
Surrogate: 1,2-1	Dichlorobenzene-d4			62 %	75-112%		"	"	"	
Sample ID:	R0-3-0.5						Semivolatile	Organic Cor	npounds by	EPA Method 8270D
Phenol			ND	U	2,500	"	B18D112	04/23/18	05/07/18	8270D
Bis(2-chloroeth	yl)ether		ND	U	480	"	"	"	"	8270D
2-Chlorophenol			ND	U	2,500	"	"	"	"	8270D
1,3-Dichlorober	nzene		ND	U	480	"	"	"	"	8270D
1,4-Dichlorober	nzene		ND	U	480	"	"	"	"	8270D
Benzyl alcohol			ND	U	2,500	"	"	"	"	8270D
1,2-Dichlorober	nzene		ND	U	480	"	"	"	"	8270D
2-Methylphenol	l		ND	U	2,500	"	"	"	"	8270D
Bis(2-chloro-1-	methylethyl) ether		ND	U	480	"	"	"	"	8270D
3&4-Methylphe	enol		ND	U	2,500	"	"	"	"	8270D
N-Nitrosodiproj	pylamine		ND	U	480	"	"	"	"	8270D
Hexachloroetha	ne		ND	U	480	"	"	"	"	8270D
Nitrobenzene			ND	U	480	"	"	"	"	8270D
Isophorone			ND	U	480	"	"	"	"	8270D
2-Nitrophenol			ND	U	2,500	"	"	"	"	8270D
2,4-Dimethylph	enol		ND	U, J, Q2	2,500	"	"	"	"	8270D
Bis(2-chloroeth	oxy)methane		ND	U	480	"	"	"	"	8270D
2,4-Dichlorophe	enol		ND	U	2,500	"	"	"	"	8270D
1,2,4-Trichlorob	benzene		ND	U	480	"	"	"	"	8270D
Naphthalene			ND	U	480	"	"	"	"	8270D
4-Chloroaniline				U	2,500	"	"	"	"	8270D
Hexachlorobuta			ND		480	"	"	"	"	8270D
4-Chloro-3-met				U	2,500		"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street

San Francisco CA, 94105

SDG: 18108E **Reported:** 05/15/18 12:22

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 18040	31-03						So	oil - Sample	ed: 04/18/18 09:30
Sample ID: R0-3-0	.5								EPA Method 8270D
2-Methylnaphthalene		ND		480	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
Hexachlorocyclopentadie	ne	ND	U	2,500	"	"	"		8270D
2,4,6-Trichlorophenol		ND		2,500	"	"	"		8270D
2,4,5-Trichlorophenol		ND	U	2,500	"	"	"		8270D
2-Chloronaphthalene		ND	U	480	"	"	"		8270D
2-Nitroaniline		ND	U	2,500	"	"	"	"	8270D
Dimethyl phthalate		ND	U	480	"	"	"		8270D
2,6-Dinitrotoluene		ND	U	480	"		"	"	8270D
Acenaphthylene		ND	U	480	"	"	"	"	8270D
3-Nitroaniline		ND	U	2,500	"	"	"		8270D
Acenaphthene		ND	U	480	"	"	"	"	8270D
2,4-Dinitrophenol		ND	U, C3, J	9,700	"		"		8270D
4-Nitrophenol		ND	U	2,500	"		"		8270D
Dibenzofuran		ND	U	480	"		"		8270D
2,4-Dinitrotoluene		ND	U	480	"		"		8270D
Diethyl phthalate		ND	U	480	"		"		8270D
Fluorene		ND	U	480	"				8270D
4-Chlorophenyl phenyl et	her	ND	U	480					8270D
4-Nitroaniline		ND	U, J, Q2	2,500	"		"		8270D
4,6-Dinitro-2-methylpher	nol	ND	U, C3, J	2,500	"	"	"		8270D
Diphenyl amine		ND	U, J, Q2	480	"				8270D
4-Bromophenyl phenyl et	her	ND	U	480					8270D
Hexachlorobenzene		ND	U	480	"				8270D
Pentachlorophenol		ND	U, C3, J	9,700	"				8270D
Phenanthrene			0,05,5	480	"				8270D
Anthracene		730 ND	U	480	"				8270D
Carbazole		ND	U, J, Q2	480	"				8270D
Di-n-butyl phthalate		ND		480	"				8270D
Fluoranthene		760	0	480	"				8270D
Pyrene		1,300		480	"				8270D 8270D
Butyl benzyl phthalate		540		480	"				8270D
Benzo(a)anthracene		460	C1, J	480	"	"	"		8270D
3,3'-Dichlorobenzidine		ND	U, C4, J, Q2	480	"		"		8270D
Chrysene		1,200		480	"	"			8270D
Bis(2-ethylhexyl) phthala	te	2,700		480	"		"		8270D
Di-n-octyl phthalate		ND	U, J, Q2, Q3	480	"				8270D
Benzo(b)fluoranthene		1,700		480	"				8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-03							S	oil - Sampl	ed: 04/18/18 09:30
Sample ID:	R0-3-0.5									EPA Method 8270I
Benzo(k)fluora				C1, J	480	ug/kg dry	B18D112	04/23/18	05/07/18	8270D
Benzo(a)pyrene			570		480	"	"	"	"	8270D
ndeno(1,2,3-cc			310		480	"	"	"	"	8270D
Dibenz(a,h)antl	nracene		ND	U	480	"	"	"	"	8270D
Benzo(g,h,i)per	ylene		500		480	"	"	"	"	8270D
urrogate: 2-Fl	luorophenol			59 %	20-111%		"	"	"	
urrogate: Phe	nol-d5			22 %	20-111%		"	"	"	
urrogate: 2-C	hlorophenol-d4			90 %	20-121%		"	"	"	
urrogate: 1,2-	Dichlorobenzene-d4			78 %	20-136%		"	"	"	
Surrogate: Nitr	obenzene-d5			82 %	20-125%		"	"	"	
Surrogate: 2-Fl	luorobiphenyl			75 %	20-121%		"	"	"	
Surrogate: 2,4,	6-Tribromophenol			99 %	20-146%		"	"	"	
Surrogate: Terp	phenyl-d14			85 %	20-131%		"	"	"	
ample ID: 6 Solids	R0-3-0.5		70		1	%	Conventional Cl B18D123	nemistry Par 04/25/18	ameters by A 04/26/18	APHA/EPA Method 3550C
Lab ID:	1804031-04		70		1		2102123			ed: 04/18/18 10:3
ample ID:	R0-4-0.5									
Aercury			0.22		0.13	mg/kg dry	B18D127	04/26/18	04/26/18	7000 Series Method 7473
rsenic			11		2.2	"	B18D103	04/23/18	05/01/18	6010C
Barium			160		5.5	"	"	"	"	6010C
Cadmium			1.4		0.55	"		"	"	6010C
Chromium			56		1.1	"	"	"	"	6010C
ead			660		3.3	"		"	"	6010C
elenium			ND	U	2.2	"	"	"	"	6010C
Silver			ND	U	1.1	"	"	"	"	6010C
ample ID:	R0-4-0.5							Pur	geable Petro	leum Hydrocarbon
PH - Gasoline	Range Organics		ND	U	5.2	"	B18D111	04/18/18	04/24/18	
urrogate: a,a,	a-Trifluorotoluene			86 %	76-124%		"	"	"	
Sample ID:	R0-4-0.5								ctable Petro	leum Hydrocarbon
ГРН - Diesel R	ange Organics			F13	27	"	B18D099	04/20/18	04/24/18	8015C
PH - Oil Rang	ge Organics		1,100	F5	110	"	"	"	"	8015C
ample ID: Aroclor 1016	R0-4-0.5		ND	II	1.4	ua/ka day	Polyo B18D129	chlorinated E 04/27/18	Biphenyls by 05/04/18	EPA Method 8082 8082A
Aroclor 1221			ND		14	ug/kg dry "	"	"	"	8082A 8082A
Aroclor 1221			ND ND		30	"				8082A 8082A
					14					
roclor 1242			ND		14					8082A
aroclor 1248			ND		14	"	"	"	"	8082A
aroclor 1254			ND	U	14	"		"	"	8082A



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action 1 ax.(010) 112 2002

Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18108E **Reported:** 05/15/18 12:22

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1804031-04							s	oil - Sampl	ed: 04/18/18 10:30
Sample ID: R0-4-0.5 Aroclor 1260 Image: Constraint of the second secon		24		14	ug/kg dry	Pol B18D129	vchlorinated H 04/27/18	Siphenyls by 05/04/18	EPA Method 8082A 8082A
Aroclor 1262		ND		14	"	"	"	"	8082A
Aroclor 1268		ND	U	14		"	"	"	8082A
Surrogate: Tetrachloro-m-xylene			50 %	20-140%		"	"	"	
Surrogate: Decachlorobiphenyl			40 %	20-125%		"	"	"	
Sample ID:R0-4-0.5Dichlorodifluoromethane		ND	U	2.9	"	Volati l B18D145	e Organic Co 04/18/18	mpounds by 04/30/18	EPA Method 8260C 8260C
Chloromethane		ND	U	2.9		"	"	"	8260C
Vinyl chloride		ND	U	2.9		"	"	"	8260C
Bromomethane		ND	J, C3, U	2.9	"	"	"	"	8260C
Chloroethane		ND	U	2.9	"	"	"	"	8260C
Trichlorofluoromethane		ND	U	2.9		"	"	"	8260C
1,1-Dichloroethene		ND	U	2.9		"	"	"	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane		ND	U	2.9	"	"	"	"	8260C
Acetone		ND	U	23		"	"	"	8260C
Carbon disulfide		ND	U, J, C3	2.9	"	"	"	"	8260C
Dichloromethane		ND	U	2.9	"	"	"	"	8260C
trans-1,2-Dichloroethene		ND	U	2.9		"	"	"	8260C
tert-Butyl methyl ether (MTBE)		ND	U	12		"	"	"	8260C
1,1-Dichloroethane		ND	U	2.9		"	"	"	8260C
cis-1,2-Dichloroethene		ND	U	2.9		"	"	"	8260C
2-Butanone (MEK)		ND	U	23		"	"	"	8260C
Chloroform		ND	U	2.9		"	"	"	8260C
1,1,1-Trichloroethane		ND	U	2.9		"	"	"	8260C
Carbon tetrachloride		ND	U	2.9	"	"	"	"	8260C
1,1-Dichloropropene		ND	U	2.9	"	"	"	"	8260C
Benzene		ND	U	2.9		"	"	"	8260C
1,2-Dichloroethane		ND	U	2.9		"	"	"	8260C
Trichloroethene		ND	U	2.9	"	"	"	"	8260C
1,2-Dichloropropane		ND	U	2.9	"	"	"	"	8260C
Bromodichloromethane		ND	U, J, C3	2.9	"	"	"	"	8260C
cis-1,3-Dichloropropene		ND	J, C3, U	2.9		"	"	"	8260C
4-Methyl-2-pentanone (MIBK)		ND	U	23	"	"	"	"	8260C
Toluene		ND	U	2.9	"	"	"	"	8260C
trans-1,3-Dichloropropene		ND	J, C3, U	2.9		"	"	"	8260C
1,1,2-Trichloroethane		ND	U	2.9	"	"	"	"	8260C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action

Emergency Response Section

SDG: 18108E

75 Hawthorne Street San Francisco CA, 94105 **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract F		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
ab ID:	1804031-04							Se	oil - Sample	ed: 04/18/18 10:3
ample ID: etrachloroethen	R0-4-0.5		ND	U	2.9	ug/kg dry	Volatile B18D145	e Organic Con 04/18/18	npounds by 04/30/18	EPA Method 82600 8260C
,3-Dichloroprop	oane		ND	U	2.9	"	"	"	"	8260C
-Hexanone			ND	U	23	"	"	"	"	8260C
hlorodibromom	ethane		ND	J, C3, U	2.9	"	"	"		8260C
,2-Dibromoetha	ne (EDB)		ND	U	2.9	"	"	"	"	8260C
hlorobenzene			ND	U	2.9	"	"	"	"	8260C
thylbenzene			ND	U	2.9	"	"	"		8260C
n&p-Xylene			4.6	C1, J	5.8	"	"	"		8260C
-Xylene			ND	U	2.9	"	"	"	"	8260C
tyrene			ND	U	2.9	"	"	"	"	8260C
romoform			ND	J, C3, U	2.9	"	"	"	"	8260C
,1,2,2-Tetrachlo	roethane		ND	U	2.9	"	"	"		8260C
,2,3-Trichloropr	opane		ND	U	2.9	"	"	"		8260C
,3-Dichlorobenz	zene		ND	U	2.9	"	"	"	"	8260C
4-Dichlorobenz	zene		ND	U	2.9	"	"	"		8260C
2-Dichlorobenz	zene		ND	U	2.9	"	"	"	"	8260C
2-Dibromo-3-c	hloropropane		ND	C3, J, U	12	"	"	"	"	8260C
thanol			150	N TIC, J		"	"	"	"	8260C
urrogate: 1,2-D	ichloroethane-d4			105 %	63-144%		"	"	"	
urrogate: Tolue	ne-d8			111 %	86-111%		"	"	"	
-	mofluorobenzene			83 %	81-110%		"	"	"	
~	ichlorobenzene-d4			64 %	75-112%		"	"	"	
ample ID: henol	R0-4-0.5		ND	U	1,900		Semivolatile B18D112	e Organic Con 04/23/18	npounds by 05/07/18	EPA Method 8270 8270D
is(2-chloroethy	Dether		ND	U	370	"	"	"	"	8270D
-Chlorophenol	,		ND		1,900	"		"		8270D
,3-Dichlorobenz	zene		ND	U	370			"		8270D
4-Dichlorobenz			ND		370			"		8270D
enzyl alcohol			ND		1,900	"	"	"		8270D
2-Dichlorobenz	zene		ND		370	"	"	"		8270D
Methylphenol			ND		1,900	"	"	"		8270D
	ethylethyl) ether		ND		370	"				8270D 8270D
&4-Methylphen			ND		370 1,900	"				8270D 8270D
-Nitrosodiprop			ND							8270D 8270D
[exachloroethan			ND		370					8270D 8270D
litrobenzene					370			"		8270D 8270D
niobenzene			ND	U	370					62/0D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-04							Se	oil - Sampl	ed: 04/18/18 10:30
Sample ID: 2-Nitrophenol	R0-4-0.5		ND	U	1,900	ug/kg dry	Semivolatile B18D112	e Organic Cor 04/23/18	npounds by 05/07/18	EPA Method 8270D 8270D
2,4-Dimethylph	enol		ND	U, Q2, J	1,900	"	"	"		8270D
Bis(2-chloroeth			ND	U	370	"	"	"		8270D
2,4-Dichlorophe	enol		ND	U	1,900	"	"	"		8270D
1,2,4-Trichlorob	enzene		ND	U	370		"	"		8270D
Naphthalene			550		370	"	"	"		8270D
4-Chloroaniline			ND	U	1,900	"	"	"		8270D
Hexachlorobuta	diene		ND	U	370	"	"	"		8270D
4-Chloro-3-metl	hylphenol		ND	U	1,900	"	"	"		8270D
2-Methylnaphth	alene		210	C1, J	370	"	"	"		8270D
Hexachlorocycl	opentadiene		ND	U	1,900	"	"	"		8270D
2,4,6-Trichlorop	bhenol		ND	U	1,900	"	"	"		8270D
2,4,5-Trichlorop	bhenol		ND	U	1,900	"	"	"		8270D
2-Chloronaphtha	alene		ND	U	370	"	"	"		8270D
2-Nitroaniline			ND	U	1,900	"	"	"		8270D
Dimethyl phthal	ate		ND	U	370	"	"	"		8270D
2,6-Dinitrotolue	me		ND	U	370	"	"	"		8270D
Acenaphthylene			190	C1, J	370	"	"	"		8270D
3-Nitroaniline			ND	U	1,900	"	"	"	"	8270D
Acenaphthene			ND	U	370	"	"	"	"	8270D
2,4-Dinitrophen	ol		ND	U, C3, J	7,500	"	"	"	"	8270D
4-Nitrophenol			ND	U	1,900	"	"	"		8270D
Dibenzofuran			ND	U	370	"	"	"		8270D
2,4-Dinitrotolue	me		ND	U	370	"	"	"		8270D
Diethyl phthalat	e		ND	U	370	"	"	"		8270D
Fluorene			ND	U	370	"	"	"		8270D
4-Chlorophenyl	phenyl ether		ND	U	370	"	"	"		8270D
4-Nitroaniline			ND	U, Q2, J	1,900	"	"	"		8270D
4,6-Dinitro-2-m	ethylphenol		ND	U, C3, J	1,900	"	"	"		8270D
Diphenyl amine			ND	U, J, Q2	370	"	"	"		8270D
4-Bromophenyl	phenyl ether		ND	U	370	"	"	"		8270D
Hexachlorobenz	zene		ND	U	370	"	"	"		8270D
Pentachloropher	nol		ND	U, C3, J	7,500	"	"	"		8270D
Phenanthrene			530		370	"	"	"		8270D
Anthracene			ND	U	370	"	"	"		8270D
Carbazole			ND	U, Q2, J	370	"	"	"		8270D
Di-n-butyl phtha	alate		ND	U	370		"	"		8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section

75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18108E **Reported:** 05/15/18 12:22

Analyte		Reanalysis / Extract Resul	Qualit t Comn			Units	Batch	Prepared	Analyzed	Method
Lab ID:	1804031-04							So	oil - Sample	ed: 04/18/18 10:30
Sample ID: Fluoranthene	R0-4-0.5	6	30		370	ug/kg dry	Semivolatile B18D112	e Organic Con 04/23/18	npounds by 05/07/18	EPA Method 8270D 8270D
Pyrene		1,30	00		370	"	"	"	"	8270D
Butyl benzyl pht	halate	Ν	DU		370	"	"	"	"	8270D
Benzo(a)anthrac	ene	50	00		370	"	"	"	"	8270D
3,3'-Dichloroben	nzidine	Ν	DU, C	4, Q2, J	370	"	"	"	"	8270D
Chrysene		70	50		370	"	"	"	"	8270D
Bis(2-ethylhexyl	l) phthalate	60	50		370	"	"	"	"	8270D
Di-n-octyl phtha	late	Ν	DU,Q	2, Q3, J	370	"	"	"	"	8270D
Benzo(b)fluoran	thene	1,40	00		370	"	"	"	"	8270D
Benzo(k)fluoran	thene	30	50 C1, J	ſ	370	"	"	"	"	8270D
Benzo(a)pyrene		60	50		370	"	"	"	"	8270D
Indeno(1,2,3-cd)	pyrene	3	0 C1, J	ſ	370	"	"	"	"	8270D
Dibenz(a,h)anthi	racene	Ň	DU		370	"	"	"	"	8270D
Benzo(g,h,i)pery	lene	3:	50 C1, J	ſ	370	"	"	"	"	8270D
Heneicosanol		2,4)0 N TI	С, Ј		"	"	"	"	8270D
Hentriacontane		2,80	00 N TI	С, Ј		"	"	"	"	8270D
Surrogate: 2-Flu	lorophenol		81	% 20-1119	%		"	"	"	
Surrogate: Phen	ol-d5		81	% 20-1119	%		"	"	"	
Surrogate: 2-Ch	lorophenol-d4		85	% 20-121	%		"	"	"	
Surrogate: 1,2-L	Dichlorobenzene-d4		72	% 20-136	%		"	"	"	
Surrogate: Nitro	benzene-d5		78	% 20-125	%		"	"	"	
Surrogate: 2-Flu	ıorobiphenyl		75	% 20-121	%		"	"	"	
Surrogate: 2,4,6	-Tribromophenol		100	0% 20-146	%		"	"	"	
Surrogate: Terph	henyl-d14		92	% 20-131	%		"	"	"	
Sample ID:	R0-4-0.5					(Conventional C	hemistry Para	meters by A	PHA/EPA Methods
% Solids		9	91		1	%	B18D123	04/25/18	04/26/18	3550C



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Result		Qualifiers / Comments	Quantitatio Limit	n Un	its	Spike Level	Source Result	%REC	%REC Limits	RPD I	RPD Limit
Batch B18D099 - 3545A ASE/PFE - TPH - Extractab	le								-	red: 04/20/18	-	
Blank (B18D099-BLK1)								Extractabl	e Petroleur	n Hydrocarbo	ns - Quality (Control
TPH - Diesel Range Organics	ND		U		5 mg/ wet	-						
TPH - Oil Range Organics	ND		U		20 "							
Surrogate: Hexacosane		3.96			,	"	5.00		79	20-111		
LCS (B18D099-BS1)												
TPH - Diesel Range Organics	45.1				5 mg/ wet	-	50.0		90	59-113		
Surrogate: Hexacosane		3.55			,	"	5.00		71	20-111		
Batch B18D103 - 3050B Sld Acid Dig - Metals by 601	0								Prepa	red: 04/23/18	Analyzed: 05	5/01/18
							Ν	Metals by EPA	-	Series Metho	•	
Blank (B18D103-BLK1)												
Arsenic	ND		U		2 mg							
Barium	ND		U		wet 5 "							
Cadmium	ND		U		0.5 "							
Chromium	ND		U		1 "							
Lead	ND		U		3 "							
Selenium	ND		U		2 "							
Silver	ND		U		1 "							
Matrix Spike (B18D103-MS1)			Source: 1804	4031-02								
Arsenic	477		504100		2.2 mg/ dry		442	11.4	105	75-125		
Barium	659				5.6 "		442	246	94	75-125		
Cadmium	13.2				0.56 "		11.0	2.51	97	75-125		
Chromium	94.7				1.1 "		44.2	55.1	90	75-125		
Lead	299				3.3 "		110	251	43	75-125		
Selenium	439				2.2 "		442	ND	99	75-125		
Silver	11.2				1.1 "		11.0	ND	101	75-125		
Matrix Spike Dup (B18D103-MSD1)			Source: 1804	4031-02								
Arsenic	460				2.2 mg dry		442	11.4	102	75-125	4	20
Barium	646				5.6 "		442	246	91	75-125	2	20
Cadmium	12.7				0.56 "		11.0	2.51	93	75-125	4	20
Chromium	94.2				1.1 "		44.2	55.1	89	75-125	0.5	20
Lead	295				3.3 "		110	251	39	75-125	1	20
Selenium	427				2.2 "		442	ND	97	75-125	3	20
Silver	10.7				1.1 "		11.0	ND	96	75-125	5	20
Reference (B18D103-SRM1)												
Arsenic	283				2 mg/ wet	-	253		112	60.9-139		
Barium	ND		U		5 "		1.60			62.5-138		



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Project Manager	: Eric Nuchims	Emergency Response Section	SDG:	18108E
Project Number	: R18S51	75 Hawthorne Street	Reported:	05/15/18 12:22
Projec	t: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
	Action			

Quality Control

N-Nitrosodipropylamine

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Analyte	Result		Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D103 - 3050B Sld Acid Dig - Metals by	6010							-	ared: 04/23/18 A	-	
Reference (B18D103-SRM1)						Μ	etals by EP.	A 6000/700	0 Series Method	s - Quality	Control
Cadmium	10.6				0.5 "	10.9		97	70.6-128		
Chromium	28.4				1 "	27.1		105	68.3-132		
Lead	57.3				3 "	56.9		101	72.8-127		
Selenium	8.21				2 "	10.0		82	41-159		
Silver	7.07				1 "	5.90		120	45.8-154		
Batch B18D111 - 5035A TPHG - TPH - Purgeab	e							Prepa	ared: 04/23/18 A	Analyzed: 0	4/24/18
Blank (B18D111-BLK1)							Purgeab	le Petroleu	m Hydrocarbon	s - Quality	Contro
TPH - Gasoline Range Organics	ND		U		5 mg/kg						
					wet						
Surrogate: a,a,a-Trifluorotoluene		110			"	125		88	76-124		
LCS (B18D111-BS1)											
TPH - Gasoline Range Organics	25,600				mg/kg wet	25000		102	78-119		
Surrogate: a,a,a-Trifluorotoluene		110			"	125		88	76-124		
Matrix Spike (B18D111-MS1)			Source: 1804	4031-02							
TPH - Gasoline Range Organics	28,100				mg/kg dry	25000	724	4 109	73-127		
Surrogate: a,a,a-Trifluorotoluene		109			"	125		87	76-124		
Matrix Spike Dup (B18D111-MSD1)		109	Source: 1804	1021 02		125		87	/0-124		
TPH - Gasoline Range Organics	30,700		Source. 1804	1031-02	mg/kg dry	25000	724	4 120	73-127	9	10
Surrogate: a,a,a-Trifluorotoluene		112			"	125		89	76-124		
Batch B18D112 - Soxhlet Extraction - SVOCs								Prepa	ared: 04/23/18 A	Analyzed: 0	5/04/18
					Semiv	olatile Orga	nic Compo	unds by EP	A Method 82701	D - Quality	Contro
Blank (B18D112-BLK1)											
Phenol	ND		U		170 ug/kg wet						
Bis(2-chloroethyl)ether	ND		U		33 "						
2-Chlorophenol	ND		U		170 "						
1,3-Dichlorobenzene	ND		U		33 "						
1,4-Dichlorobenzene	ND		U		33 "						
Benzyl alcohol	ND		U		170 "						
1,2-Dichlorobenzene	ND		U		33 "						
2-Methylphenol	ND		U		170 "						
Bis(2-chloro-1-methylethyl) ether	ND		U		33 "						
3&4-Methylphenol	ND		U		170 "						

U

ND

33 "



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Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18D112 - Soxhlet Extraction - SVOCs							-		Analyzed: 05/04/18
Blank (B18D112-BLK1)				Semiv	olatile Orga	nic Compou	inds by EP	A Method 827	0D - Quality Control
Hexachloroethane	ND	U	33	"					
Nitrobenzene	ND	U	33	"					
Isophorone	ND	U	33						
2-Nitrophenol	ND	U	170						
2,4-Dimethylphenol	ND	J, Q2, U	170						
Bis(2-chloroethoxy)methane	ND	U	33	"					
2,4-Dichlorophenol	ND	U	170	"					
1,2,4-Trichlorobenzene	ND	U	33	"					
Naphthalene	ND	U	33						
4-Chloroaniline	ND	U	170						
Hexachlorobutadiene	ND	U	33	"					
4-Chloro-3-methylphenol	ND	U	170	"					
2-Methylnaphthalene	ND	U	33	"					
Hexachlorocyclopentadiene	ND	U	170	"					
2,4,6-Trichlorophenol	ND	U	170						
2,4,5-Trichlorophenol	ND	U	170						
2-Chloronaphthalene	ND	U	33						
2-Nitroaniline	ND	U	170						
Dimethyl phthalate	ND	U	33						
2,6-Dinitrotoluene	ND	U	33						
Acenaphthylene	ND	U	33						
3-Nitroaniline	ND	U	170						
Acenaphthene	ND	U	33						
2,4-Dinitrophenol	ND	C3, J, U	670	"					
4-Nitrophenol	ND	U	170	"					
Dibenzofuran	ND	U	33	"					
2,4-Dinitrotoluene	ND	U	33	"					
Diethyl phthalate	ND	U	33	"					
Fluorene	ND	U	33	"					
4-Chlorophenyl phenyl ether	ND	U	33	"					
4-Nitroaniline	ND	Q2, J, U	170	"					
4,6-Dinitro-2-methylphenol	ND	C3, J, U	170	"					
Diphenyl amine	ND	Q2, J, U	33	"					
4-Bromophenyl phenyl ether	ND	U	33	"					
Hexachlorobenzene	ND	U	33	"					
Pentachlorophenol	ND	C3, J, U	670	"					
Phenanthrene	ND	U	33	"					
Anthracene	ND	U	33	"					
Carbazole	ND	Q2, J, U	33	"					
Di-n-butyl phthalate	ND	U	33	"					
Fluoranthene	ND	U	33	"					
Pyrene	ND	U	33	"					



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18D112 - Soxhlet Extraction - SVOCs							-		Analyzed: 05/04/18
Blank (B18D112-BLK1)				Semiv	olatile Orga	anic Compou	unds by EP	A Method 82701	D - Quality Contro
Butyl benzyl phthalate	ND	Q3, J, U	33	3 "					
Benzo(a)anthracene	ND	U	33	3 "					
3,3'-Dichlorobenzidine	ND	Q2, C4, J, U	33	3 "					
Chrysene	ND	U	33	3 "					
Bis(2-ethylhexyl) phthalate	ND	U	33	3 "					
Di-n-octyl phthalate	ND	Q2, Q3, J, C4, U	J 3.	3 "					
Benzo(b)fluoranthene	ND	U	3.	3 "					
Benzo(k)fluoranthene	ND	U	3.	3 "					
Benzo(a)pyrene	ND	U	3.	3 "					
indeno(1,2,3-cd)pyrene	ND	U	3.	3 "					
Dibenz(a,h)anthracene	ND	U	3.	3 "					
Benzo(g,h,i)perylene	ND	U	3.	3 "					
Sumaata 2 Flugunhaus		869		"	1670		52	20-111	
Surrogate: 2-Fluorophenol				"			52		
Surrogate: Phenol-d5		030			1670		62	20-111	
Surrogate: 2-Chlorophenol-d4	1	040		"	1670		62	20-121	
Surrogate: 1,2-Dichlorobenzene-d4	1	060		"	1670		63	20-136	
Surrogate: Nitrobenzene-d5	1	210		"	1670		73	20-125	
Surrogate: 2-Fluorobiphenyl	1	180		"	1670		71	20-121	
Surrogate: 2,4,6-Tribromophenol		710		"	1670		43	20-146	
Surrogate: Terphenyl-d14	1	460		"	1670		88	20-131	
LCS (B18D112-BS1)									
Phenol	1,170		170) ug/kg wet	1670		70	43-110	
Bis(2-chloroethyl)ether	246		33		333		74	47-110	
2-Chlorophenol	1,170		17) "	1670		70	42-110	
1,3-Dichlorobenzene	230		33	3 "	333		69	37-110	
,4-Dichlorobenzene	231		33	3 "	333		69	39-110	
Benzyl alcohol	1,240		170) "	1670		74	31-110	
1,2-Dichlorobenzene	227		3.	3 "	333		68	40-110	
2-Methylphenol	962		170) "	1670		58	42-110	
Bis(2-chloro-1-methylethyl) ether	204		33	3 "	333		61	44-110	
3&4-Methylphenol	936		170) "	1670		56	49-110	
N-Nitrosodipropylamine	241		3.	3 "	333		72	42-110	
Hexachloroethane	225		3.	3 "	333		67	38-110	
Nitrobenzene	269		3.	3 "	333		81	48-110	
sophorone	267		3.	3 "	333		80	43-110	
2-Nitrophenol	1,360		17		1670		82	44-110	
2,4-Dimethylphenol	352		170		1670		21	24-110	
Bis(2-chloroethoxy)methane	258		3.		333		77	45-110	
2,4-Dichlorophenol	1,270		17		1670		76	48-110	



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18D112 - Soxhlet Extraction - SVOCs							Prepa	ared: 04/23/18	Analyzed: 05/04/18
CE (D19D112 DC1)				Semiv	olatile Orga	nic Compou	inds by EP.	A Method 8270	D - Quality Contro
LCS (B18D112-BS1) 1,2,4-Trichlorobenzene	262		33	"	333		79	43-110	
Vaphthalene	262 236		33	"	333		71	45-110	
I-Chloroaniline	230 759		170		1670		46	20-110	
Iexachlorobutadiene	260		33	"	333		78	42-110	
4-Chloro-3-methylphenol	1,300		170		1670		78	50-110	
2-Methylnaphthalene	242		33	"	333		73	45-110	
Hexachlorocyclopentadiene	1,260		170		1670		76	32-110	
2,4,6-Trichlorophenol	1,260		170	"	1670		75	47-110	
2,4,5-Trichlorophenol	1,200		170	"	1670		84	52-112	
2-Chloronaphthalene	237		33	"	333		71	47-110	
2-Nitroaniline			170		1670		86	58-118	
Dimethyl phthalate	1,440		33	"	333		90	63-123	
2.6-Dinitrotoluene	301		33	"	333		90	56-116	
Acenaphthylene	300 208		33	"	333		90 62	49-110	
3-Nitroaniline			170		1670		30	49-110 29-110	
Acenaphthene	501		33	"	333		30 97	72-132	
-	325								
2,4-Dinitrophenol	939		670	"	1670		56	30-110	
4-Nitrophenol	1,770		170	"	1670		106	67-127	
Dibenzofuran	246		33	"	333		74	52-112	
2,4-Dinitrotoluene Diethyl phthalate	323		33	"	333		97 88	63-123	
	294		33	"	333			70-130	
Fluorene	250		33		333		75	54-114	
4-Chlorophenyl phenyl ether	265		33	"	333		79	53-113	
4-Nitroaniline	651		170		1670		39	56-116	
4,6-Dinitro-2-methylphenol	2,080		170		1670		125	50-110	
Diphenyl amine	23	C1, J	33	"	333		7	39-110	
4-Bromophenyl phenyl ether	257		33	"	333		77	52-112	
Hexachlorobenzene	272		33	"	333		82	52-112	
Pentachlorophenol	1,720		670	"	1670		103	49-110	
Phenanthrene	270		33	"	333		81	55-115	
Anthracene	259		33	"	333		78	57-117	
Carbazole	140		33	"	333		42	53-113	
Di-n-butyl phthalate	282		33	"	333		85	72-132	
Fluoranthene	283		33	"	333		85	63-123	
Pyrene	263		33	"	333		79	60-120	
Butyl benzyl phthalate	267		33	"	333		80	64-124	
Benzo(a)anthracene	292		33	"	333		88	60-120	
,3'-Dichlorobenzidine	ND	U	33	"	1330			20-110	
Chrysene	303		33	"	333		91	61-121	
Bis(2-ethylhexyl) phthalate	266		33	"	333		80	76-136	
Di-n-octyl phthalate	223		33	"	333		67	70-130	
Benzo(b)fluoranthene	270		33		333		81	60-120	



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Project Manager: Eric Nuchims	Emergency Response Section
Project Number: R18S51	75 Hawthorne Street
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105
Action	

 SDG:
 18108E

 Reported:
 05/15/18 12:22

Analyte	Result		Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D112 - Soxhlet Extraction - SVOCs								Prepa	ared: 04/23/18	Analyzed: 0	5/04/18
LCS (B18D112-BS1)					Semiv	olatile Orga	nic Compou	nds by EP	A Method 8270	D - Quality	Contro
Benzo(k)fluoranthene	277				33 "	333		83	64-124		
Benzo(a)pyrene	261				33 "	333		78	57-117		
Indeno(1,2,3-cd)pyrene	319				33 "	333		96	62-122		
Dibenz(a,h)anthracene	311				33 "	333		93	64-124		
Benzo(g,h,i)perylene	329				33 "	333		99	58-118		
Surrogate: 2-Fluorophenol		1080			"	1670		65	20-111		
Surrogate: Phenol-d5		1210			"	1670		73	20-111		
Surrogate: 2-Chlorophenol-d4		1200			"	1670		72	20-121		
Surrogate: 1,2-Dichlorobenzene-d4		1090			"	1670		65	20-136		
Surrogate: Nitrobenzene-d5		1230			"	1670		74	20-125		
Surrogate: 2-Fluorobiphenyl		1200			"	1670		72	20-121		
Surrogate: 2,4,6-Tribromophenol		1350			"	1670		81	20-121		
Surrogate: Terphenyl-d14		1330			"	1670		80	20-140		
	D	1550				10/0					
								Prepa	red: 04/25/18	-	4/26/18
Batch B18D123 - Solids, Dry Weight (Prep) - Solids, Weight	DIŞ				Conventio	nal Chemis	try Paramet	ers by APH	A/EPA Method	s - Quality	Control
	Diy				Conventio	nal Chemis	try Paramete	ers by APH	A/EPA Method	s - Quality	Contro
Weight	ND		U		Conventio	nal Chemis	try Paramete	ers by APH	A/EPA Method	s - Quality	Contro
Weight Blank (B18D123-BLK1)			U Source: 1804	031-01		nal Chemis	try Paramete	ers by APH	A/EPA Method	s - Quality	Contro
Weight Blank (B18D123-BLK1) % Solids				031-01		nal Chemis	try Paramet		A/EPA Method	s - Quality	Control 20
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1)	ND			031-01	1 %	nal Chemis			A/EPA Method	1	20
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473	ND			031-01	1 %		68			1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids	ND				1 %		68		Prepared & A	1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1)	ND 69		Source: 1804	0.6	1 % 1 %		68		Prepared & A	1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury	ND 69		Source: 1804 U	0.(031-02	1 % 1 % 025 mg/kg wet		68	\$ 6000/7000	Prepared & A	1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1)	ND 69 ND		Source: 1804 U	0.0 031-02 0	1 % 1 %	М	68 letals by EPA	\$ 6000/7000	Prepared & A Series Method	1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury	ND 69 ND		Source: 1804 U Source: 1804	0.0 031-02 031-02	1 % 1 % 025 mg/kg wet	М	68 letals by EPA	. 6000/700 (Prepared & A Series Method	1 Analyzed: 0	20 04/26/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Matrix Spike Dup (B18D127-MSD1)	ND 69 ND 3.45		Source: 1804 U Source: 1804	0.0 031-02 031-02	1 % 1 % 025 mg/kg wet 1.19 mg/kg dry .18 mg/kg	M 3.14	68 letals by EPA 0.188	. 6000/700 (Prepared & A Series Method 80-120	l Analyzed: 0 is - Quality	20 14/26/18 Control
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Matrix Spike Dup (B18D127-MSD1) Mercury	ND 69 ND 3.45		Source: 1804 U Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 1.19 mg/kg dry .18 mg/kg	M 3.14	68 letals by EPA 0.188	. 6000/700 (Prepared & A Series Method 80-120	l Analyzed: 0 is - Quality	20 14/26/18 Control
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Reference (B18D127-SRM1)	ND 69 ND 3.45 3.11		Source: 1804 U Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 0.19 mg/kg dry 0.18 mg/kg dry 034 mg/kg	M 3.14 2.86 1.10	68 [etals by EP4 0.188 0.188	104 104 104 Prepa	Prepared & 4 9 Series Method 80-120 80-120 80-120 rred: 04/27/18 4	1 Analyzed: 0 Is - Quality	20 14/26/18 Control 20 25/04/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Matrix Spike Dup (B18D127-MSD1) Mercury Reference (B18D127-SRM1) Mercury Batch B18D129 - 3545A ASE/PFE - PCBs	ND 69 ND 3.45 3.11		Source: 1804 U Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 0.19 mg/kg dry 0.18 mg/kg dry 034 mg/kg	M 3.14 2.86 1.10	68 [etals by EP4 0.188 0.188	104 104 104 Prepa	Prepared & A 9 Series Method 80-120 80-120 80-120	1 Analyzed: 0 Is - Quality	20 14/26/18 Control 20 25/04/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Matrix Spike Dup (B18D127-MSD1) Mercury Reference (B18D127-SRM1) Mercury	ND 69 ND 3.45 3.11		Source: 1804 U Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 19 mg/kg dry 034 mg/kg wet 13 ug/kg	M 3.14 2.86 1.10	68 [etals by EP4 0.188 0.188	104 104 104 Prepa	Prepared & 4 9 Series Method 80-120 80-120 80-120 rred: 04/27/18 4	1 Analyzed: 0 Is - Quality	20 14/26/18 Control 20 25/04/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Reference (B18D127-SRM1) Mercury Batch B18D129 - 3545A ASE/PFE - PCBs Blank (B18D129-BLK1)	ND 69 ND 3.45 3.11 1.14 ND		Source: 1804 U Source: 1804 Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 19 mg/kg dry 034 mg/kg wet	M 3.14 2.86 1.10	68 [etals by EP4 0.188 0.188	104 104 104 Prepa	Prepared & 4 9 Series Method 80-120 80-120 80-120 rred: 04/27/18 4	1 Analyzed: 0 Is - Quality	20 14/26/18 Control 20 25/04/18
Weight Blank (B18D123-BLK1) % Solids Duplicate (B18D123-DUP1) % Solids Batch B18D127 - 7473 Hg Prep - Mercury by 7473 Blank (B18D127-BLK1) Mercury Matrix Spike (B18D127-MS1) Mercury Matrix Spike Dup (B18D127-MSD1) Mercury Reference (B18D127-SRM1) Mercury Batch B18D129 - 3545A ASE/PFE - PCBs Blank (B18D129-BLK1) Aroclor 1016	ND 69 ND 3.45 3.11 1.14		Source: 1804 U Source: 1804 Source: 1804	0.0 031-02 0 031-02 0	1 % 1 % 025 mg/kg wet 019 mg/kg dry 0.18 mg/kg dry 0.18 mg/kg wet 0.13 ug/kg wet	M 3.14 2.86 1.10	68 [etals by EP4 0.188 0.188	104 104 104 Prepa	Prepared & 4 9 Series Method 80-120 80-120 80-120 rred: 04/27/18 4	1 Analyzed: 0 Is - Quality	20 14/26/18 Control 20 25/04/18



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit Unit	Spike S Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D129 - 3545A ASE/PFE - PCBs						Prepa	ared: 04/27/18 A	Analyzed: (5/04/18
Blank (B18D129-BLK1)				Polychlo	rinated Biphe	enyls by EP	A Method 8082	A - Quality	Contro
Aroclor 1248	ND	U	13 "						
Aroclor 1254	ND	U	13 "						
Aroclor 1260	ND	U	13 "						
Aroclor 1262	ND	U	13 "						
Aroclor 1268	ND	U	13 "						
Surrogate: Tetrachloro-m-xylene		56.3	"	66.7		85	20-140		
Surrogate: Decachlorobiphenyl		56.0	"	66.7		84	20-125		
LCS (B18D129-BS1)									
Aroclor-1016	43.9		13 ug/kg wet	g 66.7		66	62-111		
Aroclor-1260	46.5		13 "	66.7		70	56-124		
Surrogate: Tetrachloro-m-xylene		44.8	"	66.7		67	20-140		
Surrogate: Decachlorobiphenyl		47.0	"	66.7		71	20-125		
Matrix Spike (B18D129-MS1)		Source: 180	4031-02						
Aroclor 1016	74.7		15 ug/kş dry	g 75.3	NE	99	20-134		
Aroclor-1260	57.3		15 "	75.3	19.2	2 51	20-139		
Surrogate: Tetrachloro-m-xylene		46.0	"	75.3		61	20-140		
Surrogate: Decachlorobiphenyl		37.9	"	75.3		50	20-125		
Matrix Spike Dup (B18D129-MSD1)		Source: 180	4031-02						
Aroclor 1016	74.1		15 ug/ką dry	g 75.4	NE	98	20-134	0.9	20
Aroclor-1260	60.1		15 "	75.4	19.2	2 54	20-139	5	20
Surrogate: Tetrachloro-m-xylene		47.4	"	75.4		63	20-140		
Surrogate: Decachlorobiphenyl		38.4	"	75.4		51	20-125		
Batch B18D138 - 3545A ASE/PFE - TPH - Extrac	rtable						ared: 04/30/18 A		
Blank (B18D138-BLK1)					Extractab	ie retroleu	m Hydrocarbon	s - Quanty	Contro
TPH - Diesel Range Organics	ND	U	5 mg/k wet	g					
TPH - Oil Range Organics	ND	U	20 "						
Surrogate: Hexacosane		3.29	"	5.00		66	20-111		
LCS (B18D138-BS1)									
TPH - Diesel Range Organics	43.2		5 mg/k wet	g 50.0		86	59-113		



Bromodichloromethane

cis-1,3-Dichloropropene

United States Environmental Protection Agency Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 20			Response S thorne Stre cisco CA, 94	et	SDG: 18108E Reported: 05/15/18 12:22					
Action	18 Kemovai		San Franc	cisco CA, 92	105					
Quality Control										
Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D138 - 3545A ASE/PFE - TPH - Extractable	•						Prepa	red: 04/30/18 A	nalyzed: (5/01/18
LCS (B18D138-BS1)						Extractabl	e Petroleur	n Hydrocarbons	s - Quality	Contro
Surrogate: Hexacosane	3.10)		"	5.00		62	20-111		
Matrix Spike (B18D138-MS1)		Source: 180	4031-02RE1							
TPH - Diesel Range Organics	238			34 mg/kg dry	338	163	22	21-112		
Surrogate: Hexacosane	7.46	í		"	33.8		22	20-111		
Matrix Spike Dup (B18D138-MSD1)		Source: 180	4031-02RE1							
TPH - Diesel Range Organics	290			34 mg/kg dry	340	163	37	21-112	20	50
Surrogate: Hexacosane	9.60)		"	34.0		28	20-111		
Batch B18D145 - 5035A VOA Solid - VOCs, solids, low	v							Prepared & A	-	
level				V	olatile Org	anic Compou	nds by EPA	A Method 8260C	- Quality	Contro
Blank (B18D145-BLK1)										
Dichlorodifluoromethane	ND	U		2.5 ug/kg wet						
Chloromethane	ND	U		2.5 "						
Vinyl chloride	ND	U		2.5 "						
Bromomethane	ND	J, C3, U		2.5 "						
Chloroethane	ND	U		2.5 "						
Trichlorofluoromethane	ND	U		2.5 "						
1,1-Dichloroethene	ND	U		2.5 "						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U		2.5 "						
Acetone	ND	U		20 "						
Carbon disulfide	ND	J, C3, U		2.5 "						
Dichloromethane	ND	U		2.5 "						
trans-1,2-Dichloroethene	ND	U		2.5 "						
tert-Butyl methyl ether (MTBE)	ND	U		10 "						
1,1-Dichloroethane	ND	U		2.5 "						
cis-1,2-Dichloroethene	ND	U		2.5 "						
2-Butanone (MEK)	ND	U		20 "						
Chloroform	ND	U		2.5 "						
1,1,1-Trichloroethane	ND	U		2.5 "						
Carbon tetrachloride	ND	U		2.5 "						
1,1-Dichloropropene	ND	U		2.5 "						
Benzene	ND	U		2.5 "						
1,2-Dichloroethane	ND	U		2.5 "						
Trichloroethene	ND	U		2.5 "						
1,2-Dichloropropane	ND	U		2.5 "						
Promodiableromethene	ND	L C2 11		25 "						

2.5 "

2.5 "

J, C3, U

J, C3, U

ND

ND



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D145 - 5035A VOA Solid - VOCs, solid	ls, low							Prepared &	Analyzed: (4/30/18
level				V	olatile Orga	nic Compou	inds by EP.	A Method 8260	C - Quality	Contro
Blank (B18D145-BLK1)										
4-Methyl-2-pentanone (MIBK)	ND	U	20							
Toluene	ND	U	2.5							
trans-1,3-Dichloropropene	ND	J, C3, U	2.5							
1,1,2-Trichloroethane	ND	U	2.5	"						
Tetrachloroethene	ND	U	2.5							
1,3-Dichloropropane	ND	U	2.5	"						
2-Hexanone	ND	U	20	"						
Chlorodibromomethane	ND	J, C3, U	2.5	"						
1,2-Dibromoethane (EDB)	ND	U	2.5	"						
Chlorobenzene	ND	U	2.5	"						
Ethylbenzene	ND	U	2.5	"						
m&p-Xylene	ND	U	5	"						
o-Xylene	ND	U	2.5	"						
Styrene	ND	U	2.5	"						
Bromoform	ND	J, C3, U	2.5	"						
1,1,2,2-Tetrachloroethane	ND	U	2.5	"						
1,2,3-Trichloropropane	ND	U	2.5	"						
1,3-Dichlorobenzene	ND	U	2.5	"						
1,4-Dichlorobenzene	ND	U	2.5	"						
1,2-Dichlorobenzene	ND	U	2.5	"						
1,2-Dibromo-3-chloropropane	ND	J, C3, U	10	"						
Surrogate: 1,2-Dichloroethane-d4		25.8		"	25.0		103	63-144		
Surrogate: Toluene-d8		24.8		"	25.0		99	86-111		
-				"						
Surrogate: 4-Bromofluorobenzene		24.6		"	25.0		98	81-110		
Surrogate: 1,2-Dichlorobenzene-d4		23.5		"	25.0		94	75-112		
LCS (B18D145-BS1)										
Dichlorodifluoromethane	26		2.5	ug/kg	25.0		104	75-120		
Chloromethane	26.9		2.5	wet "	25.0		107	69-137		
Vinyl chloride	27.5		2.5		25.0		110	79-116		
Bromomethane	30.7		2.5		25.0		123	76-132		
Chloroethane	30.4		2.5	"	25.0		122	74-130		
Trichlorofluoromethane	28.2		2.5		25.0		113	58-133		
1,1-Dichloroethene	27.6		2.5		25.0		110	74-119		
1,1,2-Trichloro-1,2,2-trifluoroethane	28.5		2.5		25.0		114	66-128		
Acetone	216		20		200		108	45-144		
Dichloromethane	26.2		2.5		25.0		105	20-200		
trans-1,2-Dichloroethene	26.8		2.5		25.0		105	77-117		
tert-Butyl methyl ether (MTBE)	106		10		100		107	79-122		
1,1-Dichloroethane	27.2		2.5		25.0		100	82-112		
1,1 Diemotoculaire	21.2		2.5		25.0		109	02-112		



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18D145 - 5035A VOA Solid - VOCs,	solids, low							Prepared &	Analyzed: 04/30/18
level				V	olatile Orga	nic Compou	inds by EP.	A Method 8260	C - Quality Contro
LCS (B18D145-BS1)			2.5		25.0		10.0	(0.104	
cis-1,2-Dichloroethene	26.5			"	25.0		106	68-124	
2-Butanone (MEK)	230		20		200		115	65-124	
Chloroform	28		2.0		25.0		112	63-125	
1,1,1-Trichloroethane	26.6		210		25.0		106	65-124 54-120	
Carbon tetrachloride 1,1-Dichloropropene	25.3		2.0		25.0 25.0		101 111	54-130 73-121	
Benzene	27.8				25.0		109	81-117	
1,2-Dichloroethane	27.3				25.0		109	78-117	
Trichloroethene	27.4				25.0 25.0		98	75-117	
1,2-Dichloropropane	24.6			"	25.0		99	76-120	
Bromodichloromethane	24.6			"	25.0		95 95	67-122	
cis-1,3-Dichloropropene	23.8 23.7		210	"	25.0		95 95	51-136	
4-Methyl-2-pentanone (MIBK)	227		2.5	"	200		114	73-123	
Toluene	27.6			"	25.0		114	78-115	
trans-1,3-Dichloropropene	26.4		210	"	25.0		106	42-140	
1,1,2-Trichloroethane	20.4		2.0	"	25.0		100	80-114	
Tetrachloroethene	26.9			"	25.0		108	75-116	
1,3-Dichloropropane	27.5			"	25.0		110	78-114	
2-Hexanone	228		20		200		114	59-132	
Chlorodibromomethane	25.4				25.0		102	56-132	
1,2-Dibromoethane (EDB)	27.8		2.5		25.0		111	70-123	
Chlorobenzene	27.2		2.5	"	25.0		109	80-113	
Ethylbenzene	27.9		2.5		25.0		112	64-127	
m&p-Xylene	54.6		5		50.0		109	64-124	
o-Xylene	27.6		2.5		25.0		111	48-137	
Styrene	27.9		2.5		25.0		111	49-133	
Bromoform	22.9		2.5		25.0		92	46-140	
1,1,2,2-Tetrachloroethane	28.6		2.5		25.0		114	70-121	
1,2,3-Trichloropropane	28.1		2.5	"	25.0		112	75-117	
1,3-Dichlorobenzene	26.5		2.5	"	25.0		106	65-122	
1,4-Dichlorobenzene	25.9		2.5	"	25.0		104	63-122	
1,2-Dichlorobenzene	26.3		2.5	"	25.0		105	72-118	
1,2-Dibromo-3-chloropropane	108		10	"	100		108	51-134	
Surrogate: 1,2-Dichloroethane-d4	25	.4		"	25.0		102	63-144	
Surrogate: Toluene-d8	25			"	25.0		102	86-111	
Surrogate: 4-Bromofluorobenzene	24			"	25.0		100	81-110	
Surrogate: 1,2-Dichlorobenzene-d4	24			"	25.0		98	75-112	
Matrix Spike (B18D145-MS1)	24	Source: 180403	1 02		23.0		20	, 5-112	
Dichlorodifluoromethane	19	Source, 100403	3.4 u	ıg/kg Iry	34.0	NE	56	62-122	



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

1 87.(310) 412-2302

Emergency Response Section 75 Hawthorne Street

San Francisco CA, 94105

 SDG:
 18108E

 Reported:
 05/15/18 12:22

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18D145 - 5035A VOA Solid - VOCs,	solids, low						Prepa	ared: 04/18/18 A	Analyzed: 05/01/18
level				V	olatile Orga	nic Compou	nds by EP.	A Method 82600	C - Quality Control
Matrix Spike (B18D145-MS1)		Source: 1804							
Chloromethane	27.8		3.4		34.0	ND		60-120	
Vinyl chloride	22.5		3.4		34.0	ND		62-122	
Bromomethane	23.1		3.4		34.0	ND		69-129	
Chloroethane	33.4		3.4		34.0	ND		66-126	
Trichlorofluoromethane	17.8		3.4		34.0	ND		64-124	
1,1-Dichloroethene	17.3		3.4		34.0	ND		63-123	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.9		3.4		34.0	ND		63-123	
Acetone	92.1		2'		272	ND		57-117	
Dichloromethane	27.2		3.4		34.0	ND		48-110	
trans-1,2-Dichloroethene	13.9		3.4		34.0	ND		63-123	
tert-Butyl methyl ether (MTBE)	121		14		136	ND		62-122	
1,1-Dichloroethane	24.3		3.4		34.0	ND		62-122	
cis-1,2-Dichloroethene	19.1		3.4		34.0	ND		62-122	
2-Butanone (MEK)	73.4		2'		272	ND		61-121	
Chloroform	24.6		3.4		34.0	ND		61-121	
1,1,1-Trichloroethane	17		3.4		34.0	ND		59-119	
Carbon tetrachloride	7.88		3.4		34.0	ND	23	59-119	
1,1-Dichloropropene	15.9		3.4		34.0	ND		63-123	
Benzene	23.7		3.4		34.0	ND	70	65-125	
1,2-Dichloroethane	27.5		3.4		34.0	ND		62-122	
Trichloroethene	11.5		3.4		34.0	ND		79-139	
1,2-Dichloropropane	18.4		3.4		34.0	ND		63-123	
Bromodichloromethane	6.6		3.4		34.0	ND		61-121	
cis-1,3-Dichloropropene	8.1		3.4		34.0	ND		61-121	
4-Methyl-2-pentanone (MIBK)	138		2'		272	ND		62-122	
Toluene	21.4		3.4		34.0	ND		66-126	
trans-1,3-Dichloropropene	12.6		3.4	4 "	34.0	ND	37	60-120	
1,1,2-Trichloroethane	27.3		3.4		34.0	ND	80	59-119	
Tetrachloroethene	11.1		3.4		34.0	ND	33	64-124	
1,3-Dichloropropane	28		3.4		34.0	ND		62-122	
2-Hexanone	75		2'		272	ND	28	64-124	
Chlorodibromomethane	5.74		3.4		34.0	ND		62-122	
1,2-Dibromoethane (EDB)	19.8		3.4		34.0	ND		61-121	
Chlorobenzene	14.5		3.4		34.0	ND		63-123	
Ethylbenzene	13.4		3.4		34.0	ND	39	67-127	
m&p-Xylene	26.2		6.5		68.0	ND		66-126	
o-Xylene	12.9		3.4		34.0	ND		66-126	
Styrene	10.2		3.4		34.0	ND		64-124	
Bromoform	1.99	J	3.4		34.0	ND		61-121	
1,1,2,2-Tetrachloroethane	11		3.4		34.0	ND		70-130	
1,2,3-Trichloropropane	14.9		3.4		34.0	ND		59-119	
1,3-Dichlorobenzene	5.2		3.4	4 "	34.0	ND	15	61-121	



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

 SDG:
 18108E

 Reported:
 05/15/18 12:22

Quality Control

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Analyte	Result		Qualifiers / Comments	Quantitation Limit	1	Units	Spike Level	Source Result	%REC	%REC Limits	RPD 1	RPD Limit
Batch B18D145 - 5035A VOA Solid - VOCs, sol	ids, low								Prepa	ared: 04/18/18	Analyzed: 05	5/01/18
level						V	olatile Orga	nic Compou	nds by EP	A Method 8260	C - Quality (Contro
Matrix Spike (B18D145-MS1)		5	Source: 1804	031-02								
1,4-Dichlorobenzene	5.37				3.4	"	34.0	ND	16	61-121		
1,2-Dichlorobenzene	5.09				3.4	"	34.0	ND	15	59-119		
1,2-Dibromo-3-chloropropane	10.4	J	J		14	"	136	ND	8	56-116		
Surrogate: 1,2-Dichloroethane-d4		26.9				"	25.0		108	63-144		
Surrogate: Toluene-d8		31.7				"	25.0		127	86-111		
Surrogate: 4-Bromofluorobenzene		18.8				"	25.0		75	81-110		
Surrogate: 1,2-Dichlorobenzene-d4		12.5				"	25.0		50	75-112		
Matrix Spike Dup (B18D145-MSD1)			Source: 1804	031-02								
Dichlorodifluoromethane	24.2		50urce. 1004	001-02		ug/kg	36.9	ND	65	62-122	16	20
Chloromethane	27				3.7	dry "	36.9	ND	73	60-120	11	20
Vinyl chloride	24.3				3.7	"	36.9	ND	66	62-122	0.2	20
Bromomethane	18.8				3.7	"	36.9	ND	51	69-129	29	20
Chloroethane	35.8				3.7	"	36.9	ND		66-126	1	20
Trichlorofluoromethane	21.3				3.7	"	36.9	ND	58	64-124	10	20
1.1-Dichloroethene	20				3.7		36.9	ND		63-123	6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	12.2				3.7	"	36.9	ND		63-123	3	20
Acetone	66.6				30		295	ND		57-117	40	20
Dichloromethane	28.3				3.7		36.9	ND		48-110	4	20
trans-1,2-Dichloroethene	13.9				3.7		36.9	ND		63-123	8	20
tert-Butyl methyl ether (MTBE)	127				15	"	148	ND		62-122	3	20
1,1-Dichloroethane	27				3.7	"	36.9	ND		62-122	2	20
cis-1,2-Dichloroethene	19.8				3.7		36.9	ND		62-122	4	20
2-Butanone (MEK)	45.9				30		295	ND		61-121	54	20
Chloroform	27.6				3.7		36.9	ND		61-121	3	20
1.1.1-Trichloroethane					3.7		36.9	ND		59-119	6	20
Carbon tetrachloride	17.4				3.7		36.9	ND		59-119	4	20
1,1-Dichloropropene	8.18				3.7		36.9	ND		63-123	5	20
Benzene	16.4				3.7		36.9	ND		65-125	5	20
1,2-Dichloroethane	24.5				3.7 3.7		36.9	ND		62-122	9	20
	27.3											
Trichloroethene	11.7				3.7	"	36.9	ND		79-139	6	20
1,2-Dichloropropane	19.2				3.7		36.9	ND		63-123	4	20
Bromodichloromethane	6.88				3.7	"	36.9	ND		61-121	4	20
cis-1,3-Dichloropropene	6.77				3.7		36.9	ND		61-121	26	20
4-Methyl-2-pentanone (MIBK)	96.7				30	"	295	ND		62-122	43	20
Toluene	22.6				3.7		36.9	ND		66-126	3	20
trans-1,3-Dichloropropene	11.1				3.7	"	36.9	ND		60-120	21	20
1,1,2-Trichloroethane	28.3				3.7	"	36.9	ND		59-119	4	20
Tetrachloroethene	10.8				3.7	"	36.9	ND		64-124	11	20
1,3-Dichloropropane	29.6				3.7	"	36.9	ND	80	62-122	3	20



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section

 SDG:
 18108E

 Reported:
 05/15/18 12:22

75 Hawthorne Street San Francisco CA, 94105

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18D145 - 5035A VOA Solid - VOCs, so	lids, low						-	ured: 04/18/18 A	•	
level		0 1	0.21 0.2	,	Volatile Orga	anic Compour	nds by EP ₂	A Method 8260C	C - Quality	Contro
Matrix Spike Dup (B18D145-MSD1)		Source: 1804			205			()) (10	-
2-Hexanone	71.4		30		295	ND		64-124	13	20
Chlorodibromomethane	6.36		3.7		36.9	ND	17	62-122	2	20
1,2-Dibromoethane (EDB)	19.7		3.7		36.9	ND	53	61-121	9	20
Chlorobenzene	14.9		3.7		36.9	ND		63-123	5	20
Ethylbenzene	13.5		3.7		36.9	ND		67-127	7	20
m&p-Xylene	25.7		7.4	1 "	73.8	ND	35	66-126	10	20
o-Xylene	12.5		3.7	7 "	36.9	ND	34	66-126	12	20
Styrene	9.93		3.7	7 "	36.9	ND	27	64-124	11	20
Bromoform	3.08	J	3.7	7 "	36.9	ND	8	61-121	35	20
1,1,2,2-Tetrachloroethane	11.5		3.7	7 "	36.9	ND	31	70-130	4	20
1,2,3-Trichloropropane	16.4		3.7	7 "	36.9	ND	44	59-119	2	20
1,3-Dichlorobenzene	4.66		3.7	7 "	36.9	ND	13	61-121	19	20
1,4-Dichlorobenzene	4.83		3.7	7 "	36.9	ND	13	61-121	19	20
1,2-Dichlorobenzene	4.78		3.7	7 "	36.9	ND	13	59-119	14	20
1,2-Dibromo-3-chloropropane	8.5	J	15	5 "	148	ND	6	56-116	28	20
Surrogate: 1,2-Dichloroethane-d4	2	27.2		"	25.0		109	63-144		
Surrogate: Toluene-d8	-	31.2		"	25.0		125	86-111		
Surrogate: 4-Bromofluorobenzene		19.5		"	25.0		78	81-110		
Surrogate: 1,2-Dichlorobenzene-d4		12.5		"	25.0		50	75-112		

Batch B18E011 - 5035A VOA Solid - VOCs, solids, low level

Blank (B18E011-BLK1)			
Dichlorodifluoromethane	ND	U	2.5 ug/kg
			wet
Chloromethane	ND	U	2.5 "
Vinyl chloride	ND	U	2.5 "
Bromomethane	1.6	C3, J	2.5 "
Chloroethane	ND	U	2.5 "
Trichlorofluoromethane	ND	U	2.5 "
1,1-Dichloroethene	ND	U	2.5 "
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	2.5 "
Acetone	ND	U	20 "
Carbon disulfide	ND	C3, J, U	2.5 "
Dichloromethane	ND	U	2.5 "
trans-1,2-Dichloroethene	ND	U	2.5 "
tert-Butyl methyl ether (MTBE)	ND	U	10 "
1,1-Dichloroethane	ND	U	2.5 "
cis-1,2-Dichloroethene	ND	U	2.5 "
2-Butanone (MEK)	ND	U	20 "
Chloroform	ND	U	2.5 "

Prepared & Analyzed: 05/01/18

Volatile Organic Compounds by EPA Method 8260C - Quality Control



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ſ	Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
	Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
	Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
	Action		

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limi
Batch B18E011 - 5035A VOA Solid - VOCs, s	solids, low level							Prepared &	Analyzed: 05/01/1
Blank (B18E011-BLK1)				v	olatile Orga	nic Compou	inds by EP	A Method 826	C - Quality Cont
1,1,1-Trichloroethane	ND	J, C3, U	2.5						
Carbon tetrachloride	ND	C3, J, U	2.5						
1,1-Dichloropropene	ND	J, C3, U	2.5						
Benzene	ND	C3, J, U	2.5						
1,2-Dichloroethane	ND	J, C3, U	2.5						
Trichloroethene	ND	C3, J, U	2.5						
1,2-Dichloropropane	ND	C3, J, U	2.5						
Bromodichloromethane	ND	C3, J, U	2.5						
cis-1,3-Dichloropropene	ND	C3, J, U	2.5						
4-Methyl-2-pentanone (MIBK)	ND	U	20						
Toluene	ND	U	2.5						
trans-1,3-Dichloropropene	ND	C3, J, U	2.5						
1,1,2-Trichloroethane	ND	U	2.5						
Tetrachloroethene	ND	U	2.5						
1,3-Dichloropropane	ND	U	2.5						
2-Hexanone	ND	U	20						
Chlorodibromomethane	ND	C3, J, U	2.5						
1,2-Dibromoethane (EDB)	ND	U	2.5						
Chlorobenzene	ND	U	2.5						
Ethylbenzene	ND	U	2.5						
m&p-Xylene	ND	U							
o-Xylene	ND	U	2.5						
Styrene	ND	U	2.5						
Bromoform	ND	C3, J, U	2.5						
1,1,2,2-Tetrachloroethane	ND	U	2.5						
1,2,3-Trichloropropane	ND	U	2.5						
1,3-Dichlorobenzene	ND	U	2.5						
1,4-Dichlorobenzene	ND	U	2.5						
1,2-Dichlorobenzene	ND	U	2.5						
1,2-Dibromo-3-chloropropane	ND	C3, J, U	10						
Surrogate: 1,2-Dichloroethane-d4		17.1		"	25.0		68	63-144	
Surrogate: Toluene-d8		24.8		"	25.0		99	86-111	
Surrogate: 4-Bromofluorobenzene		24.5		"	25.0		98	81-110	
Surrogate: 1,2-Dichlorobenzene-d4		25.7		"	25.0		103	75-112	
LCS (B18E011-BS1)									
Dichlorodifluoromethane	29.9		2.5	ug/kg wet	25.0		120	75-120	
Chloromethane	28.7		2.5		25.0		115	69-137	
Vinyl chloride	30.6		2.5	"	25.0		122	79-116	
Bromomethane	25.8		2.5	"	25.0		103	76-132	



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Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E011 - 5035A VOA Solid - VOCs,	solids, low level							Prepared & A	Analyzed: 05/01/18
LCS (B18E011-BS1)				V	olatile Orga	nic Compou	inds by EP.	A Method 8260	C - Quality Control
Chloroethane	26.7		2.5	"	25.0		107	74-130	
Trichlorofluoromethane	31.5		2.5		25.0		126	58-133	
1.1-Dichloroethene	30.1		2.5		25.0		120	74-119	
1,1,2-Trichloro-1,2,2-trifluoroethane	30.7		2.5	"	25.0		123	66-128	
Acetone	227		20	"	200		113	45-144	
Dichloromethane	25.9		2.5	"	25.0		104	20-200	
trans-1.2-Dichloroethene	29.4		2.5		25.0		117	77-117	
tert-Butyl methyl ether (MTBE)	95.2		10		100		95	79-122	
1,1-Dichloroethane	28.3		2.5		25.0		113	82-112	
cis-1,2-Dichloroethene	28.1		2.5		25.0		113	68-124	
2-Butanone (MEK)	224		20	"	200		112	65-124	
Chloroform	28		2.5	"	25.0		112	63-125	
1,1,1-Trichloroethane	25.6		2.5	"	25.0		103	65-124	
Carbon tetrachloride	25		2.5	"	25.0		100	54-130	
1,1-Dichloropropene	26.4		2.5		25.0		106	73-121	
Benzene	24.7		2.5		25.0		99	81-117	
1,2-Dichloroethane	22.9		2.5		25.0		92	78-117	
Trichloroethene	25.9		2.5		25.0		104	75-117	
1,2-Dichloropropane	23.2		2.5		25.0		93	76-120	
Bromodichloromethane	21.5		2.5		25.0		86	67-122	
cis-1,3-Dichloropropene	20.9		2.5		25.0		84	51-136	
4-Methyl-2-pentanone (MIBK)	205		20	"	200		103	73-123	
Toluene	27.8		2.5	"	25.0		111	78-115	
trans-1,3-Dichloropropene	21.5		2.5	"	25.0		86	42-140	
1,1,2-Trichloroethane	24.2		2.5	"	25.0		97	80-114	
Tetrachloroethene	28.9		2.5	"	25.0		116	75-116	
1,3-Dichloropropane	24.7		2.5	"	25.0		99	78-114	
2-Hexanone	209		20	"	200		104	59-132	
Chlorodibromomethane	21.5		2.5	"	25.0		86	56-132	
1,2-Dibromoethane (EDB)	24.1		2.5	"	25.0		96	70-123	
Chlorobenzene	26.4		2.5	"	25.0		106	80-113	
Ethylbenzene	27.6		2.5	"	25.0		111	64-127	
m&p-Xylene	54.7		5	"	50.0		109	64-124	
o-Xylene	26.9		2.5	"	25.0		108	48-137	
Styrene	26.2		2.5	"	25.0		105	49-133	
Bromoform	19.9		2.5	"	25.0		79	46-140	
1,1,2,2-Tetrachloroethane	23.5		2.5	"	25.0		94	70-121	
1,2,3-Trichloropropane	24.5		2.5	"	25.0		98	75-117	
1,3-Dichlorobenzene	25.2		2.5	"	25.0		101	65-122	
1,4-Dichlorobenzene	25.1		2.5	"	25.0		101	63-122	
1,2-Dichlorobenzene	24.3		2.5	"	25.0		97	72-118	
1,2-Dibromo-3-chloropropane	88.7		10	"	100		89	51-134	



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action		Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105			SDG: 18108E Reported: 05/15/18 12:22					
Quality Control										
Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E011 - 5035A VOA Solid	- VOCs, solids, low level							Prepared a	& Analyzed: 0	5/01/18

Batch B18E011 - 5035A VOA Solid - VOCs, solids, low level

LCS (B18E011-BS1)

Surrogate: 1,2-Dichloroethane-d4	22.7	" 25.0	91	63-144
Surrogate: Toluene-d8	25.7	" 25.0	103	86-111
Surrogate: 4-Bromofluorobenzene	24.3	" 25.0	97	81-110
Surrogate: 1,2-Dichlorobenzene-d4	24.0	" 25.0	96	75-112

Volatile Organic Compounds by EPA Method 8260C - Quality Control



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18108E
Project Number: R18S51	75 Hawthorne Street	Reported: 05/15/18 12:22
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Qualifiers and Comments

- Q7 Surrogate spike recoveries for this sample were outside control limits.
- Q6 Matrix spike/matrix spike duplicate precision criteria were not met for this analyte (see MS/MSD results for this batch in QC summary).
- Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
- Q3 The quantitation limit standard did not meet recovery criteria for this analyte.
- Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).
- Q1 The internal standard associated with this analyte did not meet area count criteria.
- N TIC Tentatively Idenitified Compound This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
 - G1 The results from the two columns for this compound do not meet the dual column percent difference criteria for positive identification.
 - F5 Product Type: Motor Oil
 - F13 Fuel or Product Type: mixed or unknown
 - C4 The calibration verification check did not meet % difference criteria for this analyte.
 - C3 The initial calibration for this analyte did not meet calibration criteria.
 - C1 The reported concentration for this analyte is below the quantitation limit.
 - U Not Detected
 - NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	5/24/2018
Subject:	Analytical Testing Results - Project R18S51 SDG: 18123D
From:	Peter Husby, Director EPA Region 9 Laboratory EMD-3-1
То:	Eric Nuchims Emergency Response Section SFD-9-2

Attached are the results from the analysis of samples from the **Bercovich Smelter April 2018 Removal Action** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Mercury by EPA method 7473 Percent Solids Metals by ICP



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18123D
Project Number: R18S51	75 Hawthorne Street	Reported:	05/24/18 08:52
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
Topsoil-1	1805009-01	Solid	04/20/18 16:05	05/03/18 13:30
Backfill-1	1805009-02	Solid	04/23/18 14:37	05/03/18 13:30
R6-3-1	1805009-03	Solid	04/24/18 14:45	05/03/18 13:30
R6-3-1-dup	1805009-04	Solid	04/24/18 14:47	05/03/18 13:30
R6-2-1	1805009-05	Solid	04/24/18 15:37	05/03/18 13:30
Backfill-3	1805009-06	Solid	04/26/18 11:02	05/03/18 13:30
R1-1-1	1805009-07	Solid	04/27/18 16:15	05/03/18 13:30
R5-1-1	1805009-08	Solid	04/28/18 16:20	05/03/18 13:30
Topsoil-3	1805009-09	Solid	04/30/18 16:34	05/03/18 13:30

Work Order 1805009

Samples in work order 1805009 were received pre-dried and sieved in XRF cups. Sample results are reported on an "as received" basis. No precent solids determination was performed and no dry-weight correction applied.



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

(-----

Emergency Response Section 75 Hawthorne Street

San Francisco CA, 94105

SDG: 18123D **Reported:** 05/24/18 08:52

Sample Results

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805009-01							Sol	id - Sample	ed: 04/20/18 16:0
Sample ID:	Topsoil-1							Metals by	EPA 6000/7	000 Series Method
Mercury			ND	A2, J, U	0.029	mg/kg wet	B18E097	05/14/18	05/14/18	7473
Arsenic			4.9		2	"	B18E048	05/07/18	05/18/18	6010C
Barium			170		5	"	"	"	"	6010C
Cadmium			ND	U	0.50	"	"	"	"	6010C
Chromium			39		1	"	"	"	"	6010C
Lead			3.9		3	"	"	"	"	6010C
Selenium			ND	U	2	"	"	"	"	6010C
Silver			ND	U	1	"	"	"	"	6010C
ab ID:	1805009-02							Sol	id - Sample	ed: 04/23/18 14:3
Sample ID:	Backfill-1							Metals by	EPA 6000/7	000 Series Methods
Mercury			0.56	A2, J	0.023	mg/kg wet	B18E097	05/14/18	05/14/18	7473
Arsenic			4.5		2	"	B18E048	05/07/18	05/18/18	6010C
Barium			160		5	"	"	"	"	6010C
Cadmium			ND	U	0.50	"	"	"	"	6010C
Chromium			28		1	"	"	"	"	6010C
lead			4.5		3	"	"	"	"	6010C
elenium			ND	U	2	"	"	"	"	6010C
Silver			ND	U	1	"	"	"	"	6010C
Lab ID:	1805009-03							Sol	id - Sample	ed: 04/24/18 14:4
Sample ID: Lead	R6-3-1		1,200		3	mg/kg wet	B18E048	Metals by 05/07/18	EPA 6000/7 05/18/18	000 Series Method 6010C
Lab ID:	1805009-04							Sol	id - Sample	ed: 04/24/18 14:4
Sample ID:	R6-3-1-dup							Metals by	EPA 6000/7	000 Series Method
Lead	_		1,300		3	mg/kg wet	B18E048	05/07/18	05/18/18	
Lab ID:	1805009-05							Sol	id - Sample	ed: 04/24/18 15:3
Sample ID:	R6-2-1									000 Series Method
Lead			570		3	mg/kg wet	B18E048	05/07/18	05/18/18	6010C
	1005000 0/							Sol	id - Sample	ed: 04/26/18 11:0
	1805009-06									
ample ID:	1805009-06 Backfill-3									
ample ID: Aercury				A2, J	0.029	mg/kg wet	B18E097	05/14/18	05/14/18	7473
ample ID: Aercury Arsenic		RE1	4.7	A2, J	2	"	B18E048	05/14/18 05/07/18	05/14/18 05/21/18	7473 6010C
Sample ID: Mercury Arsenic Barium		RE1	4.7 180		2 5	"	B18E048 "	05/14/18 05/07/18 "	05/14/18 05/21/18 05/18/18	7473 6010C 6010C
Sample ID: Mercury Arsenic Barium		RE1 RE1	4.7		2	"	B18E048	05/14/18 05/07/18	05/14/18 05/21/18 05/18/18 05/21/18	7473 6010C
Gample ID: Mercury Arsenic Barium Cadmium			4.7 180		2 5	"	B18E048 "	05/14/18 05/07/18 "	05/14/18 05/21/18 05/18/18	7473 6010C 6010C
Cab ID: Sample ID: Mercury Arsenic Barium Cadmium Chromium Lead		RE1	4.7 180 ND		2 5 0.50	"	B18E048 " "	05/14/18 05/07/18 "	05/14/18 05/21/18 05/18/18 05/21/18	7473 6010C 6010C 6010C
Gample ID: Mercury Arsenic Barium Cadmium Chromium		RE1 RE1	4.7 180 ND 32	U	2 5 0.50 1	"	B18E048 " "	05/14/18 05/07/18 "	05/14/18 05/21/18 05/18/18 05/21/18	6010C 6010C 6010C 6010C

Lab ID: 1805009-07

Solid - Sampled: 04/27/18 16:15



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action	Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105	SDG: 18123D Reported: 05/24/18 08:52
Sample Results		

Analyte		Reanalysis / Extract	Qualifiers / Result Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805009-07						Sol	lid - Sampl	ed: 04/27/18 16:15
Sample ID:	R1-1-1						Metals by	/ EPA 6000/	7000 Series Methods
Lead		RE1	220	3	mg/kg wet	B18E048	05/07/18	05/21/18	6010C
Lab ID:	1805009-08						Sol	lid - Sampl	ed: 04/28/18 16:20
Sample ID:	R5-1-1						Metals by	y EPA 6000/	7000 Series Methods
Lead		RE1	840	3	mg/kg wet	B18E048	05/07/18	05/21/18	6010C
Lab ID:	1805009-09						Sol	lid - Sampl	ed: 04/30/18 16:34
Sample ID:	Topsoil-3						Metals by	y EPA 6000/2	7000 Series Methods
Mercury			ND A2, J, U	0.030	mg/kg wet	B18E097	05/14/18	05/14/18	7473
Arsenic		RE1	4.4	2	"	B18E048	05/07/18	05/21/18	6010C
Barium			170	5	"	"	"	05/18/18	6010C
Cadmium		RE1	ND U	0.50	"	"	"	05/21/18	6010C
Chromium		RE1	40	1	"	"	"	"	6010C
Lead		RE1	4.1	3	"	"	"	"	6010C
Selenium		RE1	ND U	2	"	"	"	"	6010C
Silver		RE1	ND U	1	"	"	"	"	6010C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18123D
Project Number: R18S51	75 Hawthorne Street	Reported: 05/24/18 08:52
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit Unit	Spike ts Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E048 - 3050B Sld Acid Dig - Metals	by 6010					-	red: 05/07/18	•	
Blank (B18E048-BLK1)				N	letals by EPA	. 6000/7000	Series Method	s - Quality	Contro
Arsenic	ND	U	2 mg/l wet	κg					
Barium	ND	U	5 "						
Cadmium	ND	U	0.5 "						
Chromium	ND	U	1 "						
Lead	ND	U	3 "						
Selenium	ND	U	2 "						
Silver	ND	U	1 "						
Matrix Spike (B18E048-MS1)		Source: 18050	9-05						
Arsenic	469		2 mg/l wet	cg 388	7.75	119	75-125		
Barium	858		5 "	388	365	127	75-125		
Cadmium	11.9		0.5 "	9.71	1.34	109	75-125		
Chromium	91.3		1 "	38.8	47.8	112	75-125		
Lead	703	Q10	3 "	97.1	565	142	75-125		
Selenium	427		2 "	388	ND	110	75-125		
Silver	11		1 "	9.71	ND	113	75-125		
Matrix Spike Dup (B18E048-MSD1)		Source: 18050	9-05						
Arsenic	442		2 mg/l wet	cg 385	7.75	113	75-125	6	20
Barium	814		5 "	385	365	117	75-125	5	20
Cadmium	11.3		0.5 "	9.62	1.34	104	75-125	5	20
Chromium	89.4		1 "	38.5	47.8	108	75-125	2	20
Lead	673	Q10	3 "	96.2	565	112	75-125	4	20
Selenium	402		2 "	385	ND	105	75-125	6	20
Silver	10.4		1 "	9.62	ND	109	75-125	5	20
Reference (B18E048-SRM1)									
Arsenic	335		2 mg/l wet	kg 253		132	60.9-139		
Barium	ND	U	5 "	1.60			62.5-138		
Cadmium	12		0.5 "	10.9		110	70.6-128		
Chromium	31.5		1 "	27.1		116	68.3-132		
Lead	63.4		3 "	56.9		111	72.8-127		
Selenium	9.63		2 "	10.0		96	41-159		
Silver	6.63		1 "	5.90		112	45.8-154		

Metals by EPA 6000/7000 Series Methods - Quality Control Blank (B18E097-BLK1) 0.025 mg/kg Mercury ND U wet Matrix Spike (B18E097-MS1) Source: 1805009-01 0.03 mg/kg Mercury 0.508 0.494 ND 103 80-120 wet



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchi Project Number: R18S51 Project: Bercovich Action	ms Smelter April 2018 Removal		Emergency Ro 75 Hawth San Francis	orne Stre	et			SDG: 181231 orted: 05/24/1		
Quality Control										
Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E097 - 7473 Hg Prep - Me	rcury by 7473							Prepared & A	Analyzed: (05/14/18
					Μ	letals by EPA	6000/7000	0 Series Method	ls - Quality	Control
Matrix Spike Dup (B18E097-MSD1))	Source: 1805	009-01							
Mercury	0.527		0.0	3 mg/kg wet	0.501	ND	105	80-120	2	20
Reference (B18E097-SRM1)										
Mercury	1.06		0.03	4 mg/kg wet	1.10		97	80-120		



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18123D
Project Number: R18S51	75 Hawthorne Street	Reported: 05/24/18 08:52
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Qualifiers and Comments

- Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
 - J The reported result for this analyte should be considered an estimated value.
- C1 The reported concentration for this analyte is below the quantitation limit.
- A2 The sample was received above the recommended temperature range.
- U Not Detected
- NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	5/24/2018
Subject:	Analytical Testing Results - Project R18S51 SDG: 18123E
From:	Peter Husby, Director EPA Region 9 Laboratory EMD-3-1
То:	Eric Nuchims Emergency Response Section SFD-9-2

Attached are the results from the analysis of samples from the **Bercovich Smelter April 2018 Removal Action** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Lead on Air Filters



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18123E
Project Number: R18S51	75 Hawthorne Street	Reported:	05/24/18 10:06
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
BR-23-041818	1805010-01	Air Filter	04/18/18 08:41	05/03/18 13:30
BR-25-041818	1805010-02	Air Filter	04/18/18 08:43	05/03/18 13:30
BR-PA1-042118	1805010-03	Air Filter	04/21/18 08:30	05/03/18 13:30
BR-PA2-042118	1805010-04	Air Filter	04/21/18 08:31	05/03/18 13:30
BR-22-042318	1805010-05	Air Filter	04/23/18 07:29	05/03/18 13:30
BR-24-042318	1805010-06	Air Filter	04/23/18 07:31	05/03/18 13:30
BR-22-050218	1805010-07	Air Filter	05/02/18 07:34	05/03/18 13:30
BR-21-050218	1805010-08	Air Filter	05/02/18 07:34	05/03/18 13:30
BR-24-050218	1805010-09	Air Filter	05/02/18 07:36	05/03/18 13:30



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18123E **Reported:** 05/24/18 10:06

Sample Results

Lead

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Р	repared	Analyzed	Method
Lab ID:	1805010-01								Air Filt	er - Sampl	ed: 04/18/18 08:41
Sample ID: Lead	BR-23-041818		ND	U	0.18	ug/Filter	Federal B18E119	-	alent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Lab ID:	1805010-02								Air Filt	er - Sampl	ed: 04/18/18 08:43
Sample ID: Lead	BR-25-041818		ND	U	0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitorin EQL-0710-192
Lab ID:	1805010-03								Air Filt	er - Sampl	ed: 04/21/18 08:30
Sample ID: Lead	BR-PA1-042118		ND	U	0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitorinş EQL-0710-192
Lab ID:	1805010-04								Air Filt	er - Sampl	ed: 04/21/18 08:31
Sample ID: Lead	BR-PA2-042118		0.19		0.18	ug/Filter	Federal B18E119	-	alent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Lab ID:	1805010-05								Air Filt	er - Sampl	ed: 04/23/18 07:29
Sample ID: Lead	BR-22-042318		ND	U	0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Lab ID:	1805010-06								Air Filt	er - Sampl	ed: 04/23/18 07:31
Sample ID: Lead	BR-24-042318		ND	U	0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitorin EQL-0710-192
Lab ID:	1805010-07								Air Filt	er - Sampl	ed: 05/02/18 07:34
Sample ID: Lead	BR-22-050218		0.46		0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitorinş EQL-0710-192
Lab ID:	1805010-08								Air Filt	er - Sampl	ed: 05/02/18 07:34
Sample ID: Lead	BR-21-050218		0.41		0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Lab ID:	1805010-09								Air Filt	er - Sampl	ed: 05/02/18 07:30
Sample ID: Lead	BR-24-050218		ND	U	0.18	ug/Filter	Federal B18E119		alent Meth 05/18/18		ient Air Monitoring EQL-0710-192
Quality Co	ontrol										
Analyte		Result		Qualifiers / Comments	Quantitation Limit	Units	•	ource Result	%REC	%REC Limits	RPD RPD Lim
Batch B18E119	- Air Filter Digestion -	Lead on Air Filters				Federal	Equivalent Me	thods fo	-		8 Analyzed: 05/22/ oring - Quality Cont
Blank (B18E119	9-BLK1)				· · ·						
	B (1)	ND		U	0.18	ug/Filter					
LCS (B18E119- Lead	BS1)	2			0.18	ug/Filter	2.00		100	80-120	
LCS Dup (B18H	(119-BSD1)					-					

2.01

101

80-120

0.6

20

0.18 ug/Filter 2.00



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18123E **Reported:** 05/24/18 10:06

Qualifiers and Comments

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	5/30/2018
Subject:	Analytical Testing Results - Project R18S51 SDG: 18131A
From:	Peter Husby, Director EPA Region 9 Laboratory EMD-3-1
То:	Eric Nuchims Emergency Response Section SFD-9-2

Attached are the results from the analysis of samples from the **Bercovich Smelter April 2018 Removal Action** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Lead on Air Filters



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action		sponse Section orne Street co CA, 94105		18131A 05/30/18 13:55
ANALYTICAL REPORT FOR SAMPLES				
Sample ID	Laboratory ID	Matrix	Date Collected	Date Received

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
BR-22-050718	1805026-01	Air Filter	05/07/18 07:35	05/11/18 14:43
BR-12-051018	1805026-02	Air Filter	05/10/18 10:58	05/11/18 14:43
BR-FB	1805026-03	Air Filter	05/11/18 08:00	05/11/18 14:43



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Number: R18S51		
J	75 Hawthorne Street Reported:	05/30/18 13:55
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte		Reanalysis / Extract	Qualifiers / Result Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805026-01						Air Filt	er - Sample	ed: 05/07/18 07:35
Sample ID:	BR-22-050718					Federal Ec	uuivalent Meth	ods for Amb	ient Air Monitoring
Lead			ND U	0.18	ug/Filter	B18E119	05/18/18		EQL-0710-192
Lab ID:	1805026-02						Air Filt	er - Sample	ed: 05/10/18 10:58
Sample ID:	BR-12-051018					Federal Ec	uuivalent Meth	ods for Amb	ient Air Monitoring
Lead			ND U	0.18	ug/Filter	B18E119	05/18/18		EQL-0710-192
Lab ID:	1805026-03						Air Filt	ter - Sample	ed: 05/11/18 08:00
Sample ID:	BR-FB					Federal Ec	uuivalent Meth	ods for Amb	ient Air Monitoring
Lead			ND U	0.18	ug/Filter	B18E119	05/18/18		EQL-0710-192
Quality C	ontrol								
_									

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E119 - Air Filter Digestion - Lead on Air Filters Prepared: 05/18/18 Analyzed: 05									Analyzed: 05/22/18
				Federal	Equivale	nt Methods f	or Ambien	t Air Monitori	ng - Quality Contro
Blank (B18E119-BLK1)									
Lead	ND	U	0.1	8 ug/Filter					
LCS (B18E119-BS1)									
Lead	2		0.1	8 ug/Filter	2.00		100	80-120	
LCS Dup (B18E119-BSD1)									
Lead	2.01		0.1	8 ug/Filter	2.00		101	80-120	0.6 20



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18131A **Reported:** 05/30/18 13:55

Qualifiers and Comments

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	5/31/2018
Subject:	Analytical Testing Results - Project R18S51
	SDG: 18131B
From:	Peter Husby, Director
	EPA Region 9 Laboratory
	EMD-3-1
То:	Eric Nuchims
	Emergency Response Section
	SFD-9-2

Attached are the results from the analysis of samples from the **Bercovich Smelter April 2018 Removal Action** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Mercury by EPA method 7473 Percent Solids Metals by ICP



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action	75 Hawth	esponse Section orne Street co CA, 94105		18131B 05/31/18 11:26	
ANALYTICAL REPORT FOR SAMPLES					
Sample ID	Laboratory ID	Matrix	Date Collected	Date Received	
Backfill-6	1805027-01	Soil	05/10/18 14:34	05/11/18 14:43	
R8-2-6	1805027-02	Soil	05/07/18 15:38	05/11/18 14:43	

1805027-03

1805027-04

1805027-05

Soil

Soil

Soil

R12-1-1 R9-1-1

R9-1-1_dup

Work Order 1805027

Samples in work order 1805027 were received pre-dried and sieved in XRF cups. Sample results are reported on an "as received" basis. No precent solids determination was performed and no dry-weight correction applied.

Mercury: Samples received at 24 degrees C, outside the recommended temperature range of 0 - 6 degrees C for mercury. The mercury result is flagged as estimated.

05/10/18 15:24

05/10/18 15:53

05/10/18 15:54

05/11/18 14:43

05/11/18 14:43

05/11/18 14:43



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18131B **Reported:** 05/31/18 11:26

Analyte		Reanalysis / Extract R		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805027-01							Se	oil - Sample	ed: 05/10/18 14:34
Sample ID: Mercury	Backfill-6		0.12	A2, J	0.025	mg/kg wet	B18E097	Metals by 05/14/18	EPA 6000/7 05/14/18	7000 Series Methods 7473
Arsenic			5.0	A2, J	2	mg/kg wet	B18E097	05/16/18	05/23/18	6010C
Barium			250		5		B16E115	"	"	6010C
Cadmium			ND	U	0.50	"	"	"	"	6010C
Chromium			30		1			"		6010C
Lead			4.7		3	"	"	"	"	6010C
Selenium			ND	U	2	"	"	"	"	6010C
Silver			ND	U	1	"	"	"	"	6010C
Lab ID:	1805027-02							Se	oil - Sample	ed: 05/07/18 15:38
Sample ID: Lead	R8-2-6		3,200		3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/23/18	000 Series Methods 6010C
Lab ID:	1805027-03							Se	oil - Sample	ed: 05/10/18 15:24
Sample ID: Lead	R12-1-1		810		3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/25/18	000 Series Methods 6010C
Lab ID:	1805027-04							Se	oil - Sample	ed: 05/10/18 15:53
Sample ID: Lead	R9-1-1		910		3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/23/18	000 Series Methods 6010C
Lab ID:	1805027-05							Se	oil - Sample	ed: 05/10/18 15:54
Sample ID: Lead	R9-1-1_dup		960		3	mg/kg wet	B18E115	Metals by 05/16/18	EPA 6000/7 05/23/18	'000 Series Methods 6010C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section						SDG: 18131B			
Project Number: R18S51		75 Haw	thorne Stre	et		Repo	rted: 05/31/1	8 11:26		
Project: Bercovich Smelter A		San Francisco CA, 94105								
Action										
Quality Control										
Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E097 - 7473 Hg Prep - Mercury by 7	7473							Prepared & A	-	
Blank (B18E097-BLK1)					М	etals by EPA	6000/7000) Series Methods	s - Quality	Contro
Mercury	ND	U	0	.025 mg/kg wet						
Matrix Spike (B18E097-MS2)		Source: 1805	027-01							
Mercury	0.688		0	.031 mg/kg wet	0.503	0.12	113	80-120		
Matrix Spike Dup (B18E097-MSD2)		Source: 1805	027-01	wet						
Mercury	0.611			0.03 mg/kg wet	0.491	0.12	100	80-120	12	20
Reference (B18E097-SRM1)										
Mercury	1.06		0	.034 mg/kg wet	1.10		97	80-120		
Batch B18E115 - 3050B Sld Acid Dig - Metals	by 6010			wet			-	nred: 05/16/18 A	-	
Blank (B18E115-BLK1)					М	etals by EPA	6000/7000) Series Methods	s - Quality	Contro
Arsenic	ND	U		2 mg/kg						
Barium	ND	U		wet 5 "						
Cadmium	ND ND	U		0.5 "						
Chromium	ND	U		1 "						
Lead	ND	U		3 "						
Selenium	ND	U		2 "						
Silver	ND	U		1 "						
	ND	Source: 1805	027.01	1						
Matrix Spike (B18E115-MS1)	401	Source: 1805	027-01	2	396	4.98	100	75-125		
Arsenic	401			2 mg/kg wet	390	4.98	100	/5-125		
Barium	640			5 "	396	250	99	75-125		
Cadmium	9.19			0.5 "	9.90	ND	93	75-125		
Chromium	69.5			1 "	39.6	30.4	99	75-125		
Lead	95			3 "	99.0	4.71	91	75-125		
Selenium	368			2 "	396	ND	93	75-125		
Silver	9.32			1 "	9.90	ND	94	75-125		
Matrix Spike Dup (B18E115-MSD1)		Source: 1805	027-01							
Arsenic	399			2 mg/kg wet	396	4.98	100	75-125	0.5	20
Barium	619			5 "	396	250	93	75-125	3	20
Cadmium	9.17			0.5 "	9.90	ND	93	75-125	0.2	20
Chromium	68.7			1 "	39.6	30.4	97	75-125	1	20
Lead	94.2			3 "	99.0	4.71	90	75-125	0.8	20
Selenium	366			2 "	396	ND	92	75-125	0.6	20
Silver	9.27			1 "	9.90	ND	94	75-125	0.5	20
Reference (B18E115-SRM1)										
Arsenic	284			2 mg/kg wet	252		113	60.9-139		



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Project Manager: Eric Nuchims	Emergency Response Section SDG:	18131B
Project Number: R18S51	75 Hawthorne Street Reported: (05/31/18 11:26
Project: Bercovich Smelter April 2018 Rem	oval San Francisco CA, 94105	
Action		

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E115 - 3050B Sld Acid Dig - Metal	s by 6010				M	atala by ED	•		Analyzed: 05/23/18 ods - Quality Control
Reference (B18E115-SRM1)					IVI	etais by EFF	X 0000/ /000	Series Metho	ous - Quanty Control
Cadmium	10.7		0.5	, "	10.9		98	70.6-128	
Chromium	28.5			"	27.0		106	68.3-132	
Lead	55.7		3	; "	56.7		98	72.8-127	
Selenium	8.9		2	2 "	9.97		89	41-159	
Silver	5.81			"	5.88		99	45.8-154	



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18131B
Project Number: R18S51	75 Hawthorne Street	Reported: 05/31/18 11:26
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Qualifiers and Comments

- J The reported result for this analyte should be considered an estimated value.
- C1 The reported concentration for this analyte is below the quantitation limit.
- A2 The sample was received above the recommended temperature range.
- U Not Detected
- NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.



United States Environmental Protection Agency

Region 9 Laboratory

1337 S. 46th Street Building 201

Richmond, CA 94804

Date:	6/1/2018
Subject:	Analytical Testing Results - Project R18S51
	SDG: 18135A
From:	Peter Husby, Director
	EPA Region 9 Laboratory
	EMD-3-1
То:	Eric Nuchims
	Emergency Response Section
	SFD-9-2

Attached are the results from the analysis of samples from the Bercovich Smelter April 2018 Removal Action project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

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If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Electronic CC: Greg Roussos, Weston Solutions, Inc.

Analyses included in this report:

Mercury by EPA method 7473

PAHs by GC/MS SIM

GC/FID

PCB Aroclors by GC/ECD

Metals by ICP PCB Aroclors by GC/ECD Percent Solids Semivolatile Organic Compounds by GC/MS Semivolatile Organic Compounds by GC/MS Extractable Petroleum Hydrocarbons by Extractable Petroleum Hydrocarbons by GC/FID Purgeable Petroleum Hydrocarbons by GC/FID Volatile Organic Compounds by GC/MS

Volatile Organic Compounds by GC/MS



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action	75 Hawth	esponse Section orne Street co CA, 94105		18135A 06/01/18 09:14	
ANALYTICAL REPORT FOR SAMPLES					
Sample ID	Laboratory ID	Matrix	Date Collected	Date Received	
R0-1-0.5	1805029-01	Soil	05/14/18 16:05	05/15/18 08:35	
R0-2-0.5	1805029-02	Soil	05/14/18 16:10	05/15/18 08:35	
R0-3-0.5	1805029-03	Soil	05/14/18 16:15	05/15/18 08:35	
R0-4-0.5	1805029-04	Soil	05/14/18 16:20	05/15/18 08:35	

Work Order 1805029

Samples hand delivered and received at 8 degrees C. Where applicable, results are flagged and qualified as estimated for exceeding 0 - 6 degee C recommended temperature criteria.

SVOCs: The samples and QC in batch B18E126 were brought to a final extract volume of 5 mL, instead of the SOP prescribed 1 mL, because the sample extracts are dark, foamy and viscous. Consequently some spiked compounds in the BS, MS and MSD are diluted out.



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street

San Francisco CA, 94105

SDG: 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 180)5029-01							Se	oil - Sampl	ed: 05/14/18 16:05
Sample ID: R0-	1-0.5									7000 Series Methods
Mercury				A2, J	0.036	mg/kg dry	B18E116	05/17/18	05/17/18	7473
Arsenic			20		2.9	"	B18E115	05/16/18	05/23/18	6010C
Barium			310		7.2	"	"	"	"	6010C
Cadmium			3.9		0.72	"	"	"	"	6010C
Chromium			59		1.4	"	"	"	"	6010C
Lead			180		4.3	"	"	"	"	6010C
Selenium			ND		2.9	"	"	"	"	6010C
Silver			ND	U	1.4	"	"	"	"	6010C
Sample ID: R0-	1-0.5							Purg	geable Petro	leum Hydrocarbons
TPH - Gasoline Range	e Organics		ND	A2, J, U	14	"	B18E117	05/15/18	05/17/18	8015C
Surrogate: a,a,a-Triflu	ıorotoluene			82 %	76-124%		"	"	"	
Sample ID: R0-	1-0.5							Extra	ctable Petro	leum Hydrocarbons
TPH - Diesel Range O	Organics		500	A2, F13, J	14	"	B18E114	05/16/18	05/21/18	8015C
TPH - Oil Range Orga	nics	RE1	3,900	A2, J, F13	290	"	"	"	05/22/18	8015C
Surrogate: Hexacosan	ie			66 %	20-111%		"	"	05/21/18	
Sample ID: R0-	1-0.5						Pol	ychlorinated B	iphenyls by	EPA Method 8082A
Aroclor 1016			ND	U	19	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
Aroclor 1221			ND	U	39	"	"	"	"	8082A
Aroclor 1232			ND	U	19	"	"	"	"	8082A
Aroclor 1242			ND	U	19	"	"	"	"	8082A
Aroclor 1248			ND	U	19	"	"	"	"	8082A
Aroclor 1254			ND	U	19	"	"	"	"	8082A
Aroclor-1260			33		19	"	"	"	"	8082A
Aroclor 1262			ND	U	19	"	"	"	"	8082A
Aroclor 1268			ND	U	19	"	"	"	"	8082A
C				(1.0/	20 1400/		"	"	"	
Surrogate: Tetrachloro Surrogate: Decachloro	-			61 % 46 %	20-140% 20-125%		"	"	"	
	1-0.5						¥7-1-43			EDA M-41 - 1 92000
Dichlorodifluorometha			ND	A2, C3, J, U	5	"	Volati B18E111	05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
Chloromethane				A2, J, U	5		"	"	"	8260C
Vinyl chloride				A2, J, U	5	"	"	"	"	8260C
Bromomethane				A2, J, U	5	"	"	"	"	8260C
Chloroethane				A2, J, U	5		"	"		8260C
Trichlorofluoromethar	ne			A2, J, U	5		"	"		8260C
1,1-Dichloroethene				A2, J, U	5		"	"	"	8260C
	trifluoroothana						"	"		
1,1,2-Trichloro-1,2,2-1	unnuoroethane			A2, J, U	5					8260C
Acetone			ND	A2, J, U	40	"	"	"	"	8260C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-01							S	oil - Sampl	ed: 05/14/18 16:05
Sample ID: Carbon disulfide	R0-1-0.5		ND	A2, J, U	5	ug/kg dry	Volatile B18E111	Organic Cor 05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
Dichloromethan	e		ND	A2, J, U	5	"	"	"	"	8260C
trans-1,2-Dichlo	proethene		ND	A2, J, U	5	"		"	"	8260C
tert-Butyl methy	vl ether (MTBE)		ND	A2, J, U	20	"		"	"	8260C
1,1-Dichloroetha	ane		ND	A2, J, U	5	"	"	"	"	8260C
cis-1,2-Dichloro	bethene		ND	A2, J, U	5	"	"	"	"	8260C
2-Butanone (MB	EK)		ND	A2, J, U	40	"	"	"	"	8260C
Chloroform			ND	A2, J, U	5	"	"	"	"	8260C
1,1,1-Trichloroe	thane		ND	A2, J, U	5	"		"	"	8260C
Carbon tetrachlo	oride		ND	A2, J, U	5	"	"	"	"	8260C
1,1-Dichloropro	pene		ND	A2, J, U	5	"	"	"	"	8260C
Benzene			ND	A2, Q7, J, U	5	"	"	"	"	8260C
1,2-Dichloroetha	ane		ND	A2, J, U	5	"	"	"	"	8260C
Trichloroethene			ND	A2, J, U	5	"	"	"	"	8260C
1,2-Dichloropro	pane		ND	A2, J, U	5	"	"	"	"	8260C
Bromodichloron	nethane		ND	A2, J, U	5	"		"	"	8260C
cis-1,3-Dichloro	propene		ND	A2, J, U	5	"	"	"	"	8260C
4-Methyl-2-pent	tanone (MIBK)		ND	A2, Q1, Q7,	40	"	"	"	"	8260C
Toluene			ND	J, U A2, Q1, J, Q7, U	5	"	"	"	"	8260C
trans-1,3-Dichlo	oropropene		ND	A2, J, U	5	"	"	"	"	8260C
1,1,2-Trichloroe	thane		ND	A2, J, Q7, U	5	"	"	"	"	8260C
Tetrachloroether	ne		ND	A2, Q1, J, Q7, U	5	"	"	"	"	8260C
1,3-Dichloropro	pane		ND	A2, Q1, J,	5	"	"	"	"	8260C
2-Hexanone			ND	Q7, U A2, Q1, J, Q7, U	40	"	"	"	"	8260C
Chlorodibromor	nethane		ND	A2, Q1, J,	5	"	"	"	"	8260C
1,2-Dibromoeth	ane (EDB)		ND	Q7, U A2, Q1, J, Q7, U	5	"	"	"	"	8260C
Chlorobenzene			ND	A2, Q1, J,	5	"	"	"	"	8260C
Ethylbenzene			ND	Q7, U A2, Q1, J, Q7, U	5	"	"	"	"	8260C
m&p-Xylene			ND	Q7, U A2, Q1, J, Q7, U	10	"	"	"	"	8260C
o-Xylene			ND	A2, Q1, J,	5		"	"		8260C
Styrene			ND	Q7, U A2, Q1, J, Q7, U	5	"	"	"	"	8260C
Bromoform			ND	A2, Q1, J, Q7, U	5	"	"	"	"	8260C



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-01							s	oil - Sampl	ed: 05/14/18 16:05
Sample ID:	R0-1-0.5						Volatile	Organic Co	mpounds by	EPA Method 8260C
1,1,2,2-Tetracl	hloroethane		ND	A2, Q1, J,	5	ug/kg dry	B18E111	05/15/18	05/16/18	8260C
1,2,3-Trichlor	opropane		ND	Q7, U A2, Q1, J,	5	"				8260C
				Q7, U						
1,3-Dichlorob	enzene		ND	A2, Q1, J, Q7, U	5	"	"	"	"	8260C
1,4-Dichlorob	enzene		ND	A2, Q1, J,	5	"			"	8260C
1,2-Dichlorob	077070		ND	Q7, U	<i>_</i>					8260C
1,2-Dicilio100	enzene		ND	A2, Q1, J, Q7, U	5					82000
1,2-Dibromo-3	3-chloropropane		ND	A2, Q1, J, Q7, U	20	"	"	"	"	8260C
Surrogate: 1,2	P-Dichloroethane-d4			131 %	63-144%		"	"	"	
Surrogate: Tol	luene-d8			120 %	86-111%		"	"	"	
Surrogate: 4-1	Bromofluorobenzene			68 %	81-110%		"	"	"	
Surrogate: 1,2	P-Dichlorobenzene-d4			42 %	75-112%		"	"	"	
Sample ID:	R0-1-0.5									EPA Method 8270D
Phenol			ND	A2, J, U	7,900	"	B18E126	05/21/18	05/22/18	8270D
Bis(2-chloroet	thyl)ether		ND	A2, J, U	1,500	"	"	"	"	8270D
2-Chlorophene	ol		ND	A2, J, U	7,900	"	"	"	"	8270D
1,3-Dichlorob	enzene		ND	A2, J, U	1,500	"	"		"	8270D
1,4-Dichlorob	enzene		ND	A2, J, U	1,500	"	"	"	"	8270D
Benzyl alcoho	1		ND	A2, J, U	7,900	"	"	"	"	8270D
1,2-Dichlorob	enzene		ND	A2, J, U	1,500	"	"	"	"	8270D
2-Methylphen	ol		ND	A2, J, U	7,900	"	"		"	8270D
Bis(2-chloro-1	-methylethyl) ether		ND	A2, J, U	1,500	"	"	"	"	8270D
3&4-Methylpl	henol		ND	A2, J, U	7,900	"	"	"	"	8270D
N-Nitrosodipr	opylamine		ND	A2, J, U	1,500	"	"		"	8270D
Hexachloroeth	nane		ND	A2, J, U	1,500	"	"		"	8270D
Nitrobenzene			ND	A2, J, U	1,500	"	"		"	8270D
Isophorone			ND	A2, J, U	1,500	"	"		"	8270D
2-Nitrophenol			ND	A2, J, U	7,900	"	"		"	8270D
2,4-Dimethylp	bhenol		ND	A2, J, U	7,900	"	"		"	8270D
Bis(2-chloroet	thoxy)methane			A2, J, U	1,500		"		"	8270D
2,4-Dichlorop				A2, J, U	7,900	"	"	"	"	8270D
1,2,4-Trichlor				A2, J, U	1,500	"			"	8270D
Naphthalene				A2, J, U	1,500					8270D
4-Chloroanilir	ne			A2, J, U	7,900		"			8270D
Hexachlorobu				A2, J, U	1,500	"	"		"	8270D
										8270D 8270D
4-Chloro-3-m	eurytphenor		ND	A2, J, U	7,900					02/UD



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-01							S	oil - Sample	ed: 05/14/18 16:05
Sample ID: 2-Methylnaphtl	R0-1-0.5		ND	A2, J, U	1,500	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
Hexachlorocyc	lopentadiene		ND	A2, J, U	7,900	"	"	"		8270D
2,4,6-Trichloro	phenol		ND	A2, J, U	7,900	"	"	"		8270D
2,4,5-Trichloro	phenol		ND	A2, J, U	7,900	"	"	"		8270D
2-Chloronaphth	nalene		ND	A2, J, U	1,500	"	"	"		8270D
2-Nitroaniline			ND	A2, J, U	7,900	"	"	"	"	8270D
Dimethyl phtha	late		ND	A2, J, U	1,500	"	"	"		8270D
2,6-Dinitrotolu	ene		ND	A2, J, U	1,500	"	"	"	"	8270D
Acenaphthylen	e		ND	A2, J, U	1,500	"	"	"		8270D
3-Nitroaniline			ND	A2, J, U	7,900	"	"	"	"	8270D
Acenaphthene			ND	A2, J, U	1,500	"	"	"	"	8270D
2,4-Dinitropher	nol		ND	A2, C3, C4, J, Q2, U	31,000	"	"	"	"	8270D
4-Nitrophenol			ND	A2, J, U	7,900	"	"	"	"	8270D
Dibenzofuran			ND	A2, J, U	1,500	"	"	"	"	8270D
2,4-Dinitrotolu	ene		ND	A2, J, U	1,500	"	"	"	"	8270D
Diethyl phthala	te		ND	A2, J, U	1,500	"	"	"	"	8270D
Fluorene			ND	A2, J, U	1,500	"	"	"	"	8270D
4-Chloropheny	l phenyl ether		ND	A2, J, U	1,500	"	"	"		8270D
4-Nitroaniline			ND	A2, J, Q2, U	7,900	"	"	"	"	8270D
4,6-Dinitro-2-n	nethylphenol		ND	A2, J, U	7,900	"	"	"		8270D
Diphenyl amine	e		ND	A2, J, U	1,500	"	"	"	"	8270D
4-Bromopheny	l phenyl ether		ND	A2, J, U	1,500	"	"	"		8270D
Hexachloroben	zene		ND	A2, J, U	1,500	"	"	"	"	8270D
Pentachlorophe	nol		ND	A2, C4, J, Q2, U	31,000	"	"	"	"	8270D
Phenanthrene			ND	A2, J, U	1,500	"	"	"	"	8270D
Anthracene			ND	A2, J, U	1,500	"	"	"	"	8270D
Carbazole			ND	A2, J, U	1,500	"	"	"	"	8270D
Di-n-butyl phth	alate		ND	A2, J, U	1,500	"	"	"	"	8270D
Fluoranthene				A2, C1, J	1,500	"	"	"	"	8270D
Pyrene				A2, C1, J	1,500	"	"	"	"	8270D
Butyl benzyl pł				A2, J, U	1,500	"	"	"	"	8270D
Benzo(a)anthra	cene			A2, J, U	1,500	"	"	"	"	8270D
3,3'-Dichlorobe	enzidine			A2, J, Q2, U	7,900	"	"	"	"	8270D
Chrysene				A2, C1, J	1,500	"	"	"		8270D
Bis(2-ethylhexy				A2, J	1,500	"	"	"	"	8270D
Di-n-octyl phth	alate		ND	A2, C3, J, U	1,500	"	"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract Re		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-01							S	oil - Sample	ed: 05/14/18 16:0
Sample ID: Benzo(b)fluora	R0-1-0.5 nthene		1.200	A2, C1, J	1,500	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270I 8270D
Benzo(k)fluora			<i>,</i>	A2, J, U	1,500	"	"	"	"	8270D
Benzo(a)pyrene			ND	A2, J, U	1,500		"	"	"	8270D
ndeno(1,2,3-co				A2, J, U	1,500		"	"		8270D
Dibenz(a,h)antl					1,500		"	"		8270D
Benzo(g,h,i)per				A2, C1, J	1,500			"		8270D
Dodecadien-on	-		860	N TIC, J	1,500		"	"		8270D 8270D
Iexadecanoic a	-			N TIC, J N TIC, J			"	"		8270D 8270D
itosterol				N TIC, J		"		"		8270D
inknown hydro	carbon (01)			N TIC, J		"	"	"		8270D
inknown hydro				N TIC, J			"	"	"	8270D
Surrogate: 2-Fi	luorophenol			85 %	20-111%		"	"	"	
Surrogate: Phe				89 %	20-111%		"	"	"	
-	hlorophenol-d4			90 %	20-121%		"	"	"	
urrogate: 1,2-	Dichlorobenzene-d4			79 %	20-136%		"	"	"	
urrogate: Nitr	obenzene-d5			84 %	20-125%		"	"	"	
urrogate: 2-Fi	luorobiphenyl			84 %	20-121%		"	"	"	
urrogate: 2,4,	6-Tribromophenol			113 %	20-146%		"	"	"	
urrogate: Terp	phenyl-d14			115 %	20-131%		"	"	"	
ample ID: 6 Solids	R0-1-0.5		70		1	%	Conventional Cl B18E135	nemistry Para 05/23/18	ameters by A 05/24/18	APHA/EPA Method 3550C
ab ID:	1805029-02							S	oil - Sample	ed: 05/14/18 16:1
Sample ID:	R0-2-0.5									7000 Series Method
Aercury				A2, J	0.030	mg/kg dry "	B18E116	05/17/18	05/17/18	7473
Arsenic			9.1		2		B18E115	05/16/18	05/23/18	6010C
Barium Cadmium			220		5 0.50					6010C 6010C
Thromium			2.0		0.50			"		6010C
.ead			46 150		3	"		"		6010C
Selenium			ND	U	2		"	"		6010C
Silver			ND		1		"	"	"	6010C
Sample ID:	R0-2-0.5							Daam	aabla Datua	loum Huduooonhou
-	Range Organics		ND	A2, J, U	8.3	"	B18E117	05/15/18	05/17/18	leum Hydrocarbon 8015C
urrogate: a,a,	a-Trifluorotoluene			89 %	76-124%		"	"	"	
ample ID:	R0-2-0.5							Extra		leum Hydrocarbon
ГРН - Diesel R				A2, F13, J	10	"	B18E114	05/16/18	05/21/18	
ՐPH - Oil Ranց	ge Organics		1,500	A2, F13, J	40		"	"	"	8015C
urrogate: Hex	acosane			50 %	20-111%		"	"	"	



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-02							S	oil - Sampl	ed: 05/14/18 16:10
Sample ID:	R0-2-0.5									EPA Method 8082A
Aroclor 1016			ND		13	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
Aroclor 1221			ND		27	"		"	"	8082A
Aroclor 1232			ND		13	"		"	"	8082A
Aroclor 1242			ND	U	13	"	"	"	"	8082A
Aroclor 1248			ND		13	"	"	"	"	8082A
Aroclor 1254			ND	U	13	"	"	"	"	8082A
Aroclor-1260			15		13	"	"	"	"	8082A
Aroclor 1262			ND		13	"		"	"	8082A
Aroclor 1268			ND	U	13	"		"	"	8082A
Surrogate: Tetra	chloro-m-xylene			66 %	20-140%		"	"	"	
Surrogate: Deca	chlorobiphenyl			51 %	20-125%		"	"	"	
Sample ID:	R0-2-0.5						Volati	ile Organic Co	mpounds by	EPA Method 8260C
Dichlorodifluoro	omethane		ND	A2, C3, J, U	4.2	"	B18E111	05/15/18	05/16/18	8260C
Chloromethane			ND	A2, J, U	4.2	"	"	"	"	8260C
Vinyl chloride			ND	A2, J, U	4.2	"	"	"	"	8260C
Bromomethane			ND	A2, J, U	4.2	"	"	"	"	8260C
Chloroethane			ND	A2, J, U	4.2	"	"	"	"	8260C
Trichlorofluoron	nethane		ND	A2, J, U	4.2	"	"	"	"	8260C
1,1-Dichloroethe	ene		ND	A2, J, U	4.2	"		"	"	8260C
1,1,2-Trichloro-	1,2,2-trifluoroethane		ND	A2, J, U	4.2	"	"	"	"	8260C
Acetone			130	A2, J	34	"	"	"	"	8260C
Carbon disulfide	•		ND	A2, J, U	4.2	"	"	"	"	8260C
Dichloromethan	e		ND	A2, J, U	4.2	"	"	"	"	8260C
trans-1,2-Dichlo	roethene		ND	A2, J, U	4.2	"		"	"	8260C
tert-Butyl methy	l ether (MTBE)		ND	A2, J, U	17	"		"	"	8260C
1,1-Dichloroetha	ane		ND	A2, J, U	4.2	"	"	"	"	8260C
cis-1,2-Dichloro	ethene		ND	A2, J, U	4.2	"	"	"	"	8260C
2-Butanone (ME	EK)		34	A2, J	34	"		"	"	8260C
Chloroform			ND	A2, J, U	4.2			"	"	8260C
1,1,1-Trichloroe	thane		ND	A2, J, U	4.2	"		"	"	8260C
Carbon tetrachlo	oride		ND	A2, J, U	4.2	"		"	"	8260C
1,1-Dichloroprop	pene		ND	A2, J, U	4.2			"	"	8260C
Benzene				A2, J, U	4.2			"	"	8260C
1,2-Dichloroetha	ane		ND	A2, J, U	4.2				"	8260C
Trichloroethene				A2, J, U	4.2			"	"	8260C
1,2-Dichloropro	pane			A2, J, U	4.2				"	8260C
					1.2					



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-02						S	oil - Sampl	ed: 05/14/18 16:10
Sample ID: R0-2-0.5 Bromodichloromethane	N	D A2, J, U	4.2	ug/kg dry	Volatile B18E111	Organic Cor 05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
cis-1,3-Dichloropropene	N	D A2, J, U	4.2	"	"	"	"	8260C
4-Methyl-2-pentanone (MIBK)	N	D A2, Q1, Q7,	34	"	"	"	"	8260C
Toluene	N	J, U D A2, J, Q1, U	4.2		"	"	"	8260C
rans-1,3-Dichloropropene	N	D A2, J, U	4.2	"	"	"	"	8260C
,1,2-Trichloroethane	N	D A2, Q7, J, U	4.2	"	"	"	"	8260C
Fetrachloroethene	N	D A2, J, Q7, Q1, U	4.2	"	"	"	"	8260C
,3-Dichloropropane	N	D A2, Q1, J, U	4.2	"	"	"	"	8260C
2-Hexanone	N	D A2, Q1, J, Q7, U	34		"	"	"	8260C
Chlorodibromomethane	N	D A2, Q1, Q7, J, U	4.2	"	"	"	"	8260C
,2-Dibromoethane (EDB)	N	D A2, Q1, J,	4.2		"	"	"	8260C
Chlorobenzene	N	Q7, U D A2, Q1, Q7,	4.2		"	"	"	8260C
thylbenzene	N	J, U D A2, Q1, J, U	4.2	"	"	"	"	8260C
n&p-Xylene	N	D A2, Q1, J, U	8.4		"	"	"	8260C
-Xylene	N	D A2, Q1, J, U	4.2	"	"	"	"	8260C
styrene	N	D A2, J, Q1, U	4.2	"	"	"	"	8260C
Bromoform	N	D A2, Q1, Q7,	4.2		"	"	"	8260C
,1,2,2-Tetrachloroethane	N	J, U D A2, Q1, J, Q7, U	4.2	"	"	"	"	8260C
,2,3-Trichloropropane	N	Q7, U D A2, Q1, J, Q7, U	4.2	"	"	"	"	8260C
,3-Dichlorobenzene	N	Q7, U D A2, Q1, J, Q7, U	4.2	"	"	"	"	8260C
,4-Dichlorobenzene	N	Q7, U D A2, Q1, J, Q7, U	4.2	"	"	"	"	8260C
,2-Dichlorobenzene	N	Q7, U D A2, Q1, J, Q7, U	4.2		"	"	"	8260C
,2-Dibromo-3-chloropropane	N	Q7, U D A2, Q1, J, Q7, U	17		"	"	"	8260C
Hexanol, ethyl	1	9 N TIC, J		"	"	"	"	8260C
Octanone	1	6 N TIC, J		"	"	"	"	8260C
urrogate: 1,2-Dichloroethane-d4		120 %	63-144%		"	"	"	
Surrogate: Toluene-d8		109 %	86-111%		"	"	"	
Surrogate: 4-Bromofluorobenzene		71 %	81-110%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		63 %	75-112%		"	"	"	
Sample ID: R0-2-0.5 Phenol	N	D U, A2, J	5,200	"	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
Bis(2-chloroethyl)ether		D A2, J, U	1,000	"	"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-02							Se	oil - Sampl	ed: 05/14/18 16:10
Sample ID:	R0-2-0.5									EPA Method 8270D
2-Chlorophenol			ND	A2, J, U	5,200	ug/kg dry	B18E126	05/21/18	05/22/18	8270D
1,3-Dichloroben	izene		ND	U, A2, J	1,000	"	"	"	"	8270D
1,4-Dichloroben	zene		ND		1,000	"	"	"	"	8270D
Benzyl alcohol			ND	A2, J, U	5,200	"	"	"	"	8270D
1,2-Dichloroben	izene		ND	U, A2, J	1,000	"	"	"	"	8270D
2-Methylphenol			ND	A2, J, U	5,200	"	"	"	"	8270D
Bis(2-chloro-1-r	nethylethyl) ether		ND	U, A2, J	1,000	"		"	"	8270D
3&4-Methylpher	nol		ND	A2, J, U	5,200	"		"	"	8270D
N-Nitrosodiprop	oylamine		ND	U, A2, J	1,000	"		"	"	8270D
Hexachloroetha	ne		ND	U, A2, J	1,000	"	"	"	"	8270D
Nitrobenzene			ND	U, A2, J	1,000	"	"	"	"	8270D
Isophorone			ND	U, A2, J	1,000	"	"	"	"	8270D
2-Nitrophenol			ND	A2, J, U	5,200	"	"	"	"	8270D
2,4-Dimethylphe	enol		ND	A2, J, U	5,200	"		"	"	8270D
Bis(2-chloroetho	oxy)methane		ND	A2, J, U	1,000	"		"	"	8270D
2,4-Dichlorophe	enol		ND	U, A2, J	5,200	"	"	"	"	8270D
1,2,4-Trichlorob	enzene		ND	A2, J, U	1,000	"	"	"	"	8270D
Naphthalene			ND	U, A2, J	1,000	"	"	"	"	8270D
4-Chloroaniline			ND	A2, J, U	5,200	"	"	"	"	8270D
Hexachlorobuta	diene		ND	A2, J, U	1,000	"	"	"	"	8270D
4-Chloro-3-meth	nylphenol		ND	A2, J, U	5,200	"	"	"	"	8270D
2-Methylnaphth	alene		ND	A2, J, U	1,000	"		"	"	8270D
Hexachlorocyclo	opentadiene		ND	U, A2, J	5,200	"	"	"	"	8270D
2,4,6-Trichlorop	henol		ND	U, A2, J	5,200	"		"	"	8270D
2,4,5-Trichlorop	henol		ND	U, A2, J	5,200	"	"	"	"	8270D
2-Chloronaphtha	alene		ND	U, J, A2	1,000	"	"	"	"	8270D
2-Nitroaniline			ND	A2, J, U	5,200	"	"	"	"	8270D
Dimethyl phthal	ate		ND	A2, J, U	1,000	"	"	"	"	8270D
2,6-Dinitrotolue	ne		ND	U, A2, J	1,000	"	"	"	"	8270D
Acenaphthylene			ND	A2, J, U	1,000	"	"	"	"	8270D
3-Nitroaniline			ND	A2, J, U	5,200	"	"	"	"	8270D
Acenaphthene				U, A2, J	1,000	"	"	"	"	8270D
2,4-Dinitrophene	ol			A2, C3, C4, J, Q2, U	21,000	"	"	"	"	8270D
4-Nitrophenol			ND	A2, J, U	5,200	"	"	"	"	8270D
Dibenzofuran			ND	A2, J, U	1,000			"	"	8270D
2,4-Dinitrotolue	ne		ND	A2, J, U	1,000	"	"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-02						Se	oil - Sampl	ed: 05/14/18 16:10
Sample ID: Diethyl phthala	R0-2-0.5	N	D A2, J, U	1,000	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
Fluorene		N) A2, J, U	1,000	"	"	"		8270D
4-Chlorophenyl	phenyl ether	N) A2, J, U	1,000	"	"	"		8270D
4-Nitroaniline		N	A2, J, Q2, U	5,200		"	"		8270D
4,6-Dinitro-2-m	ethylphenol	N) A2, J, U	5,200		"	"		8270D
Diphenyl amine	;	N) A2, J, U	1,000		"	"		8270D
4-Bromophenyl	phenyl ether	N) A2, J, U	1,000		"	"		8270D
Hexachlorobenz		N		1,000		"	"		8270D
Pentachlorophe		N	A2, C4, J,	21,000	"	"			8270D
Phenanthrene		N	Q2, U D U, A2, J	1.000		"			8270D
				1,000		"	"		8270D 8270D
Anthracene		N		1,000		"	"		
Carbazole	1.	N		1,000		"			8270D
Di-n-butyl phth	alate	N		1,000					8270D
Fluoranthene		62		1,000		"	"		8270D
Pyrene Detail le surrel, als	41-1-4-	61		1,000					8270D
Butyl benzyl ph Benzo(a)anthra		76 N		1,000	"	"	"		8270D 8270D
3,3'-Dichlorobe				1,000		"	"		8270D 8270D
	nzidine	N		5,200	"	"	"		
Chrysene Bis(2-ethylhexy	(1) phthalata	99		1,000 1,000					8270D 8270D
Di-n-octyl phth		7,70 N		1,000		"	"		8270D 8270D
				1,000	"	"			8270D 8270D
Benzo(b)fluorai Benzo(k)fluorai		1,60 N				"	"		8270D 8270D
				1,000		"	"		8270D
Benzo(a)pyrene		N		1,000		"			
Indeno(1,2,3-cd		N		1,000		"	"		8270D
Dibenz(a,h)anth		N		1,000		"	"		8270D
Benzo(g,h,i)per		N		1,000					8270D
	is(methyloc (01)		0 N TIC, J			"	"		8270D
	is(methyloc (02)		0 N TIC, J		"	"	"		8270D
	is(methyloc (03) is(methyloc (04)		0 N TIC, J 0 N TIC, J			"			8270D 8270D
Phthalic acid, of			0 N TIC, J 0 N TIC, J		"	"	"		8270D 8270D
Phthalic acid, d		390,00				"	"		8270D 8270D
Phthalic acid, et			0 N TIC, J		"	"	"		8270D
Phthalic acid, h			0 N TIC, J		"	"	"		8270D
Phthalic acid, is			0 N TIC, J		"	"	"		8270D
Phthalic acid, n			0 N TIC, J		"	"	"		8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-02							S	oil - Sampl	ed: 05/14/18 16:10
Sample ID: R0-2-0.5						Semivolatil	e Organic Cor	npounds by	EPA Method 8270I
Surrogate: 2-Fluorophenol			97 %	20-111%		B18E126	05/21/18	05/22/18	
Surrogate: Phenol-d5			98 %	20-111%		"	"	"	
Surrogate: 2-Chlorophenol-d4			99 %	20-121%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-	d4		90 %	20-136%		"	"	"	
Surrogate: Nitrobenzene-d5			91 %	20-125%		"	"	"	
Surrogate: 2-Fluorobiphenyl			87 %	20-121%		"	"	"	
Surrogate: 2,4,6-Tribromopheno	l		120 %	20-146%		"	"	"	
Surrogate: Terphenyl-d14			127 %	20-131%		"	"	"	
Sample ID: R0-2-0.5						Conventional C	hemistry Para	ameters by A	PHA/EPA Methods
% Solids		99		1	%	B18E135	05/23/18	05/24/18	
Lab ID: 1805029-03							S	oil - Sampl	ed: 05/14/18 16:15
Sample ID: R0-3-0.5							Metals by	y EPA 6000/7	000 Series Methods
Mercury		0.50	A2, J	0.025	mg/kg dry	B18E116	05/17/18	05/17/18	7473
Arsenic	RE1	14		2	"	B18E118	05/17/18	05/23/18	6010C
Barium	RE1	250		5.1	"	"	"	"	6010C
Cadmium	RE1	3.2		0.51	"	"	"	"	6010C
Chromium	RE1	48		1	"	"	"	"	6010C
Lead	RE1	410		3	"	"	"	"	6010C
Selenium	RE1	ND	U	2	"	"	"	"	6010C
Silver	RE1	ND	U	1	"	"	"	"	6010C
Sample ID: R0-3-0.5 TPH - Gasoline Range Organics		ND	A2, J, U	7.3	"	B18E117	Pur; 05/15/18	geable Petro 05/17/18	leum Hydrocarbons 8015C
Surrogate: a,a,a-Trifluorotoluen	2		89 %	76-124%		"	"	"	
Sample ID: R0-3-0.5							Extra	ctable Petro	leum Hydrocarbons
TPH - Diesel Range Organics	RE2	320	A2, J, F13	5.1	"	B18E114	05/16/18	05/22/18	
TPH - Oil Range Organics	RE1	2,900	A2, F13, J	200	"	"	"	05/22/18	8015C
Surrogate: Hexacosane	RE2		63 %	20-111%		"	"	05/22/18	
Sample ID: R0-3-0.5						Poly	chlorinated B	siphenyls by	EPA Method 8082A
		ND	U	13	ug/kg dry	B18E120	05/17/18	05/22/18	8082A
Aroclor 1016			U	27	"	"	"	"	8082A
Aroclor 1016		ND	0						
Aroclor 1016 Aroclor 1221		ND ND		13		"	"	"	8082A
-			U	13 13		"	"	"	8082A 8082A
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242		ND	U U						
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248		ND ND ND	U U U	13 13	"	"	"	"	8082A
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254		ND ND ND	U U U	13 13 13	"	"	"	"	8082A 8082A 8082A
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248		ND ND ND	บ บ บ บ	13 13	"	"	"	"	8082A 8082A



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal

Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte	Reanalysis / Extract	Q Result C	ualifiers / omments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-03							S	oil - Sample	ed: 05/14/18 16:15
Sample ID: R0-3-0.5						Poly	chlorinated B	iphenyls by	EPA Method 8082A
Surrogate: Tetrachloro-m-xylene			48 %	20-140%		B18E120	05/17/18	05/22/18	
Surrogate: Decachlorobiphenyl			38 %	20-125%		"	"	"	
Sample ID: R0-3-0.5 Dichlorodifluoromethane		ND 4	A2, C3, J, U	2.6		Volatil B18E111	e Organic Cor 05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
Chloromethane			U, A2, J	3.6 3.6		B10E111	"	"	8260C
Vinyl chloride			A2, J, U	3.6		"			8260C
Bromomethane			A2, J, U	3.6		"			8260C
Chloroethane			A2, J, U	3.6		"	"		8260C
Trichlorofluoromethane			A2, J, U	3.6		"	"		8260C
1,1-Dichloroethene			A2, J, U	3.6		"			8260C
1,1,2-Trichloro-1,2,2-trifluoroethane			A2, J, U	3.6		"			8260C
Acetone			A2, J	29		"			8260C
Carbon disulfide			A2, J, U	3.6	"	"	"		8260C
Dichloromethane		ND	J, A2, U	3.6		"			8260C
trans-1,2-Dichloroethene		ND .	A2, J, U	3.6		"			8260C
tert-Butyl methyl ether (MTBE)		ND -	A2, J, U	14	"	"	"		8260C
1,1-Dichloroethane		ND	A2, J, U	3.6		"			8260C
cis-1,2-Dichloroethene		ND	A2, J, U	3.6		"			8260C
2-Butanone (MEK)		ND .	A2, J, U	29	"	"	"		8260C
Chloroform		ND	A2, J, U	3.6	"	"	"		8260C
1,1,1-Trichloroethane		ND .	A2, J, U	3.6	"	"	"		8260C
Carbon tetrachloride		ND	A2, J, U	3.6	"	"	"		8260C
1,1-Dichloropropene		ND	A2, J, U	3.6	"	"	"		8260C
Benzene		ND .	A2, J, U	3.6	"	"	"		8260C
1,2-Dichloroethane		ND	A2, J, U	3.6	"	"	"		8260C
Trichloroethene		ND 4	A2, J, U	3.6	"	"	"		8260C
1,2-Dichloropropane		ND .	A2, J, U	3.6	"	"	"		8260C
Bromodichloromethane		ND 4	A2, J, U	3.6	"	"	"		8260C
cis-1,3-Dichloropropene		ND A	A2, J, U	3.6	"	"	"		8260C
4-Methyl-2-pentanone (MIBK)		ND .	A2, J, U	29	"	"	"		8260C
Toluene		ND A	A2, J, U	3.6	"	"	"		8260C
trans-1,3-Dichloropropene		ND 4	A2, J, U	3.6		"	"		8260C
1,1,2-Trichloroethane		ND .	A2, J, U	3.6		"	"		8260C
Tetrachloroethene		ND 4	A2, J, U	3.6		"	"		8260C
1,3-Dichloropropane		ND 4	A2, J, U	3.6		"	"		8260C
2-Hexanone		ND .	A2, J, U	29	"	"	"		8260C
Chlorodibromomethane		ND	A2, J, U	3.6			"		8260C



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105
 SDG:
 18135A

 Reported:
 06/01/18 09:14

Analyte		Reanalysis / Extract R		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-03							Se	oil - Sampl	ed: 05/14/18 16:1
Sample ID:	R0-3-0.5 ane (EDB)		ND	A2, J, U	3.6	ug/kg dry	Volatile B18E111	e Organic Cor 05/15/18	npounds by 05/16/18	EPA Method 8260 8260C
Chlorobenzene			ND	A2, J, U	3.6	"	"	"		8260C
Ethylbenzene			ND	A2, J, U	3.6	"	"	"		8260C
n&p-Xylene			ND	A2, J, U	7.2	"	"	"		8260C
o-Xylene			ND	A2, J, U	3.6	"	"	"		8260C
Styrene			ND	U, A2, J	3.6	"	"	"		8260C
Bromoform			ND	A2, J, U	3.6	"	"	"		8260C
,1,2,2-Tetrachle	oroethane		ND	A2, J, U	3.6	"	"	"		8260C
,2,3-Trichlorop	oropane		ND	A2, J, U	3.6	"	"	"		8260C
,3-Dichloroben	izene		ND	A2, J, U	3.6	"	"	"		8260C
,4-Dichloroben	izene		ND	A2, J, U	3.6	"	"	"		8260C
,2-Dichloroben	izene		ND	A2, J, U	3.6	"	"	"		8260C
,2-Dibromo-3-	chloropropane		ND	A2, J, U	14	"	"	"		8260C
Octanol			17	N TIC, J		"	"	"		8260C
Octanone			27	N TIC, J		"	"	"	"	8260C
Surrogate: 1,2-L	Dichloroethane-d4			126 %	63-144%		"	"	"	
Surrogate: Tolue	ene-d8			93 %	86-111%		"	"	"	
-	omofluorobenzene			89 %	81-110%		"	"	"	
-	Dichlorobenzene-d4			106 %	75-112%		"	"	"	
Sample ID: Phenol	R0-3-0.5		ND	U, A2, J	5,200	"	Semivolatile B18E126	e Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270 8270D
Bis(2-chloroethy	yl)ether		ND	U, A2, J	1,000	"	"	"		8270D
2-Chlorophenol			ND	U, A2, J	5,200	"	"	"		8270D
,3-Dichloroben				U, A2, J	1,000	"	"	"		8270D
,4-Dichloroben	zene		ND	U, A2, J	1,000	"	"	"		8270D
Benzyl alcohol			ND	U, A2, J	5,200	"	"	"		8270D
,2-Dichloroben	zene		ND	U, A2, J	1,000	"	"	"		8270D
2-Methylphenol			ND	U, A2, J	5,200	"	"	"		8270D
Bis(2-chloro-1-r	nethylethyl) ether			U, A2, J	1,000	"	"	"		8270D
&4-Methylphe	,			U, J, A2	5,200	"	"	"		8270D
N-Nitrosodiprop				U, A2, J	1,000	"	"	"		8270D
Hexachloroetha	-			U, A2, J	1,000	"	"	"		8270D
Nitrobenzene				U, A2, J	1,000	"	"	"		8270D
sophorone				U, A2, J	1,000	"	"	"		8270D
2-Nitrophenol				U, A2, J	5,200	"	"	"		8270D
2,4-Dimethylph	enol			U, A2, J	5,200	"				8270D
4-Dimetriviona										



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-03							Se	oil - Sample	ed: 05/14/18 16:15
Sample ID: 2,4-Dichloroph	R0-3-0.5 enol		ND	U, A2, J	5,200	ug/kg dry	Semivolatile B18E126	Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
1,2,4-Trichlorol	benzene		ND	U, A2, J	1,000	"	"	"		8270D
Naphthalene			ND	U, A2, J	1,000	"	"	"		8270D
4-Chloroaniline	•		ND	U, A2, J	5,200	"	"	"		8270D
Hexachlorobuta	adiene		ND	A2, J, U	1,000	"	"	"		8270D
4-Chloro-3-met	hylphenol		ND	U, A2, J	5,200	"	"	"		8270D
2-Methylnaphth	nalene		ND	U, A2, J	1,000	"	"	"		8270D
Hexachlorocycl	lopentadiene		ND	U, A2, J	5,200	"	"	"		8270D
2,4,6-Trichloroj	phenol		ND	U, A2, J	5,200	"	"	"		8270D
2,4,5-Trichloroj	phenol		ND	U, A2, J	5,200	"	"	"		8270D
2-Chloronaphth	alene		ND	U, A2, J	1,000	"	"	"		8270D
2-Nitroaniline			ND	U, A2, J	5,200	"	"	"		8270D
Dimethyl phtha	late		ND	A2, J, U	1,000	"	"	"		8270D
2,6-Dinitrotolue	ene		ND	U, A2, J	1,000	"	"	"		8270D
Acenaphthylene	5		ND	A2, J, U	1,000	"	"	"		8270D
3-Nitroaniline			ND	U, A2, J	5,200	"	"	"		8270D
Acenaphthene			ND	U, A2, J	1,000	"	"	"		8270D
2,4-Dinitropher	nol		ND	U, A2, C3,	20,000		"	"		8270D
			ND	C4, J, Q2						02700
4-Nitrophenol				U, A2, J	5,200		"			8270D
Dibenzofuran				A2, J, U	1,000					8270D
2,4-Dinitrotolue			ND	U, A2, J	1,000					8270D
Diethyl phthala 	te		ND	U, A2, J	1,000	"	"	"	"	8270D
Fluorene				A2, J, U	1,000	"	"	"		8270D
4-Chlorophenyl	l phenyl ether		ND	U, A2, J	1,000	"	"	"		8270D
4-Nitroaniline			ND	U, A2, J, Q2	5,200	"	"	"		8270D
4,6-Dinitro-2-m	nethylphenol			U, A2, J	5,200	"	"	"		8270D
Diphenyl amine			ND	A2, J, U	1,000	"	"	"		8270D
4-Bromophenyl	l phenyl ether		ND		1,000	"	"	"		8270D
Hexachloroben	zene		ND	U, A2, J	1,000	"	"	"		8270D
Pentachlorophe	nol			U, Q2, A2, C4, J	20,000	"	"	"	"	8270D
Phenanthrene				A2, C1, J	1,000	"	"	"		8270D
Anthracene				A2, J, U	1,000	"	"	"		8270D
Carbazole				A2, J, U	1,000	"	"	"		8270D
Di-n-butyl phth	alate			A2, J, U	1,000	"	"	"		8270D
Fluoranthene				A2, J	1,000	"	"	"		8270D
Pyrene			1,600	A2, J	1,000	"	"	"	"	8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte	Reanalysis / Extract Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-03						S	oil - Sampl	ed: 05/14/18 16:15
Sample ID: R0-3-0.5								EPA Method 8270D
Butyl benzyl phthalate	NI		1,000	ug/kg dry	B18E126	05/21/18	05/22/18	8270D
Benzo(a)anthracene		0 A2, C1, J	1,000	"	"	"	"	8270D
3,3'-Dichlorobenzidine	NI	D U, A2, J, Q2	5,200	"	"	"	"	8270D
Chrysene	1,10	0 A2, J	1,000	"	"	"	"	8270D
Bis(2-ethylhexyl) phthalate	NI	D U, A2, J	1,000	"	"	"	"	8270D
Di-n-octyl phthalate	NI	U, A2, C3, J	1,000	"	"	"	"	8270D
Benzo(b)fluoranthene	1,30	0 A2, J	1,000	"	"		"	8270D
Benzo(k)fluoranthene	NI	D U, A2, J	1,000	"	"	"	"	8270D
Benzo(a)pyrene	90	J, A2, C1	1,000	"	"	"	"	8270D
Indeno(1,2,3-cd)pyrene	52	0 A2, C1, J	1,000	"	"	"	"	8270D
Dibenz(a,h)anthracene	NI	D U, A2, J	1,000		"		"	8270D
Benzo(g,h,i)perylene	70	0 A2, C1, J	1,000	"	"	"	"	8270D
Alkane: Straight-Chain	5,70	0 N TIC, J		"	"		"	8270D
Surrogate: 2-Fluorophenol		95 %	20-111%		"	"	"	
Surrogate: Phenol-d5		93 %	20-111%		"	"	"	
Surrogate: 2-Chlorophenol-d4		95 %	20-121%		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4		87 %	20-136%		"	"	"	
Surrogate: Nitrobenzene-d5		89 %	20-125%		"	"	"	
Surrogate: 2-Fluorobiphenyl		86 %	20-121%		"	"	"	
Surrogate: 2,4,6-Tribromophenol		111 %	20-146%		"	"	"	
Surrogate: Terphenyl-d14		116 %	20-131%		"	"	"	
Sample ID: R0-3-0.5					Conventional C	hemistry Par	ameters by A	PHA/EPA Methods
% Solids	9	9	1	%	B18E135	05/23/18	05/24/18	
Lab ID: 1805029-04						C		od. 05/14/18 16.20

Lab ID:	1805029-04						S	oil - Sampl	ed: 05/14/18 16:20
Sample ID: Mercury	R0-4-0.5	0.25	A2, J, Q6	0.024	mg/kg dry	B18E116	Metals by 05/17/18	EPA 6000/ 05/17/18	7000 Series Methods 7473
Arsenic		12		2	"	B18E115	05/16/18	05/23/18	6010C
Barium		150		5.1	"	"	"	"	6010C
Cadmium		1.5		0.51	"	"	"	"	6010C
Chromium		55	J, Q4	1	"	"	"	"	6010C
Lead		610		3	"	"	"	"	6010C
Selenium		ND	U	2	"	"	"	"	6010C
Silver		ND	U	1	"	"	"	"	6010C
Sample ID: TPH - Gasoline	R0-4-0.5 Range Organics	ND	U, A2, J, Q6	6	"	B18E117	Pur ; 05/15/18	geable Petro 05/17/18	leum Hydrocarbons 8015C
Surrogate: a,a,a	-Trifluorotoluene		90 %	76-124%		"	"	"	
Sample ID:	R0-4-0.5						Extra	ctable Petro	leum Hydrocarbons
TPH - Diesel Ra	inge Organics	92	J, A2, F13	10	"	B18E114	05/16/18	05/21/18	8015C



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action			Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105			SDG: 18135A Reported: 06/01/18 09:14				
Sample R	esults	Reanalysis / Extract		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-04	Extract	incourt (•	•	ed: 05/14/18 16:2
Sample ID: FPH - Oil Rang	R0-4-0.5 e Organics		820	A2, F13, J	41	mg/kg dry	B18E114			leum Hydrocarbon
Surrogate: Hex	acosane			54 %	20-111%		"	"	"	
Sample ID: Aroclor 1016	R0-4-0.5		ND	U	13	ug/kg dry	Poly B18E120	ychlorinated B 05/17/18	Siphenyls by 05/22/18	EPA Method 8082 8082A
Aroclor 1221			ND	U	27	"	"	"		8082A
Aroclor 1232			ND	U	13	"	"	"		8082A
Aroclor 1242			ND	U	13	"	"	"	"	8082A
Aroclor 1248			ND	U	13	"	"	"		8082A
Aroclor 1254			ND	U	13	"	"	"	"	8082A
Aroclor-1260			23		13	"	"	"	"	8082A
Aroclor 1262			ND	U	13	"	"	"	"	8082A
Aroclor 1268			ND	U	13	"		"	"	8082A
Surrogate: Tetro	achloro-m-xylene			61 %	20-140%		"	"	"	
Surrogate: Dec	achlorobiphenyl			49 %	20-125%		"	"	"	

Sample 1D. K0-4-0.5					Volatile O	rganic Comn	ounds by	EPA Method 8260C
Dichlorodifluoromethane	ND	A2, C3, J, U	3.3	"			05/16/18	8260C
Chloromethane	ND	U, A2, J	3.3	"	"	"	"	8260C
Vinyl chloride	ND	A2, J, U	3.3	"	"	"	"	8260C
Bromomethane	ND	J, A2, U	3.3	"	"	"	"	8260C
Chloroethane	ND	A2, J, U	3.3	"	"	"	"	8260C
Trichlorofluoromethane	ND	A2, J, U	3.3	"	"	"	"	8260C
1,1-Dichloroethene	ND	A2, J, U	3.3	"	"	"	"	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	A2, J, U	3.3	"	"	"	"	8260C
Acetone	54	A2, J	27	"	"	"	"	8260C
Carbon disulfide	ND	A2, J, U	3.3	"	"	"	"	8260C
Dichloromethane	ND	A2, J, U	3.3	"	"	"	"	8260C
trans-1,2-Dichloroethene	ND	U, A2, J	3.3	"	"	"	"	8260C
tert-Butyl methyl ether (MTBE)	ND	A2, J, U	13	"	"	"	"	8260C
1,1-Dichloroethane	ND	A2, J, U	3.3	"	"	"	"	8260C
cis-1,2-Dichloroethene	ND	U, A2, J	3.3	"	"	"	"	8260C
2-Butanone (MEK)	ND	U, A2, J	27	"	"	"	"	8260C
Chloroform	ND	U, A2, J	3.3	"	"	"	"	8260C
1,1,1-Trichloroethane	ND	A2, J, U	3.3	"	"	"	"	8260C
Carbon tetrachloride	ND	U, A2, J	3.3	"	"	"	"	8260C
1,1-Dichloropropene	ND	A2, J, U	3.3	"	"	"	"	8260C
Benzene	ND	A2, J, U	3.3	"	"	"	"	8260C



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1805029-04							S	oil - Sampl	ed: 05/14/18 16:20
Sample ID: 1,2-Dichloroe	R0-4-0.5		ND	A2, J, U	3.3	ug/kg dry	Volatile B18E111	e Organic Cor 05/15/18	npounds by 05/16/18	EPA Method 8260C 8260C
Trichloroether	ne		ND	A2, J, Q4, U	3.3	"	"	"	"	8260C
1,2-Dichlorop	propane		ND	A2, J, U	3.3	"	"	"	"	8260C
Bromodichlor	omethane		ND	A2, J, U	3.3	"	"	"	"	8260C
cis-1,3-Dichlo	oropropene		ND	A2, J, U	3.3	"	"	"	"	8260C
4-Methyl-2-pe	entanone (MIBK)		ND	A2, J, Q4, U	27	"	"	"	"	8260C
Toluene			ND	U, A2, J	3.3	"	"	"	"	8260C
trans-1,3-Dich	nloropropene		ND	A2, J, U	3.3	"	"	"	"	8260C
1,1,2-Trichlor	roethane		ND	A2, J, U	3.3	"		"	"	8260C
Tetrachloroeth	nene		ND	U, A2, J	3.3	"	"	"	"	8260C
1,3-Dichlorop	propane		ND	A2, J, U	3.3	"		"	"	8260C
2-Hexanone			ND	A2, J, U	27	"	"	"	"	8260C
Chlorodibrom	omethane		ND	U, A2, J	3.3	"		"	"	8260C
1,2-Dibromoe	thane (EDB)		ND	A2, J, U	3.3	"	"	"	"	8260C
Chlorobenzen	e		ND	U, A2, J	3.3	"	"	"	"	8260C
Ethylbenzene			ND	U, A2, J	3.3	"		"	"	8260C
m&p-Xylene			ND	U, A2, J	6.7	"		"	"	8260C
o-Xylene			ND	A2, J, U	3.3	"	"	"	"	8260C
Styrene			ND	U, A2, J	3.3	"		"	"	8260C
Bromoform			ND	A2, J, U	3.3	"	"	"	"	8260C
1,1,2,2-Tetrac	hloroethane		ND	A2, J, U	3.3	"	"	"	"	8260C
1,2,3-Trichlor	opropane		ND	A2, J, U	3.3	"		"	"	8260C
1,3-Dichlorob	penzene		ND	U, A2, J, Q4	3.3	"		"	"	8260C
1,4-Dichlorob	penzene		ND	A2, J, Q4, U	3.3	"	"	"	"	8260C
1,2-Dichlorob	penzene		ND	A2, J, Q4, U	3.3	"		"	"	8260C
1,2-Dibromo-3	3-chloropropane		ND	U, A2, J	13	"	"	"	"	8260C
Surrogate: 1,2	2-Dichloroethane-d4			124 %	63-144%		"	"	"	
Surrogate: Tol	luene-d8			91 %	86-111%		"	"	"	
-	Bromofluorobenzene			93 %	81-110%		"	"	"	
Surrogate: 1,2	2-Dichlorobenzene-d4			106 %	75-112%		"	"	"	
Sample ID: Phenol	R0-4-0.5		VID	U, A2, J	5 200		Semivolatile B18E126	e Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270D 8270D
Bis(2-chloroet	thyl)ether			U, A2, J U, A2, J	5,200		B18E120	"	"	8270D 8270D
2-Chlorophen				U, A2, J U, A2, J	1,000					8270D 8270D
1,3-Dichlorob				U, A2, J U, J, A2	5,200					8270D 8270D
					1,000				"	
1,4-Dichlorob	enzene		ND	U, A2, J	1,000					8270D



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte	Reanalysis / Extract Resu		Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1805029-04							So	oil - Sample	ed: 05/14/18 16:20
Sample ID: R0-4-0.5						Semivolatile	Organic Con	npounds by	EPA Method 8270D
Benzyl alcohol		ND	U, A2, J	5,200	ug/kg dry	B18E126	05/21/18	05/22/18	8270D
1,2-Dichlorobenzene		ND	U, A2, J	1,000	"	"	"	"	8270D
2-Methylphenol		ND		5,200	"	"	"	"	8270D
Bis(2-chloro-1-methylethyl) ether		ND	U, A2, J	1,000	"	"	"	"	8270D
3&4-Methylphenol		ND	U, A2, J	5,200	"	"	"	"	8270D
N-Nitrosodipropylamine	- - -	ND	U, A2, J	1,000	"	"	"	"	8270D
Hexachloroethane	- - -	ND	U, A2, J	1,000	"	"	"	"	8270D
Nitrobenzene	- - -	ND	U, A2, J	1,000		"	"	"	8270D
Isophorone	- - -	ND	U, A2, J	1,000		"	"	"	8270D
2-Nitrophenol	-	ND	U, A2, J	5,200	"	"	"	"	8270D
2,4-Dimethylphenol		ND	U, A2, J	5,200	"	"	"	"	8270D
Bis(2-chloroethoxy)methane		ND	U, A2, J	1,000	"	"	"	"	8270D
2,4-Dichlorophenol		ND	U, A2, J	5,200	"	"	"	"	8270D
1,2,4-Trichlorobenzene	- - -	ND	U, A2, J	1,000		"	"	"	8270D
Naphthalene		ND	U, A2, J	1,000	"	"	"	"	8270D
4-Chloroaniline		ND	U, A2, J, Q4	5,200	"	"	"	"	8270D
Hexachlorobutadiene	- - -	ND	U, A2, J	1,000	"	"	"	"	8270D
4-Chloro-3-methylphenol	- - -	ND	U, A2, J	5,200	"	"	"	"	8270D
2-Methylnaphthalene	- - -	ND	U, A2, J	1,000	"	"	"	"	8270D
Hexachlorocyclopentadiene		ND	U, Q4, A2, J	5,200	"	"	"	"	8270D
2,4,6-Trichlorophenol		ND	U, A2, J	5,200	"	"	"	"	8270D
2,4,5-Trichlorophenol		ND	U, A2, J	5,200	"	"	"	"	8270D
2-Chloronaphthalene		ND	U, A2, J	1,000		"	"	"	8270D
2-Nitroaniline		ND	U, A2, J	5,200	"	"	"	"	8270D
Dimethyl phthalate		ND	U, A2, J	1,000	"	"	"	"	8270D
2,6-Dinitrotoluene		ND	U, A2, J	1,000	"	"	"	"	8270D
Acenaphthylene		ND	U, A2, J	1,000	"	"	"	"	8270D
3-Nitroaniline		ND	U, A2, J, Q4	5,200	"	"	"	"	8270D
Acenaphthene		ND	U, A2, J	1,000	"	"	"	"	8270D
2,4-Dinitrophenol		ND	U, A2, C3,	20,000		"	"	"	8270D
4-Nitrophenol		ND	C4, J, Q2, Q4 U, A2, J	5,200	"	"	"	"	8270D
Dibenzofuran		ND	U, A2, J	1,000		"	"	"	8270D
2,4-Dinitrotoluene			U, A2, J	1,000		"	"	"	8270D
Diethyl phthalate			U, A2, J	1,000		"	"	"	8270D
Fluorene			U, A2, J	1,000		"	"	"	8270D
		-		.,					



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter April 2018 Removal Action Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Analyte		Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1	805029-04							S	oil - Sampl	ed: 05/14/18 16:20
Sample ID: F 4-Nitroaniline F	R0-4-0.5		ND	U, Q4, A2, J, Q2	5,200	ug/kg dry	Semivolatile B18E126	e Organic Cor 05/21/18	npounds by 05/22/18	EPA Method 8270 8270D
4,6-Dinitro-2-methy	ylphenol		ND	-	5,200	"	"	"	"	8270D
Diphenyl amine			ND	U, A2, J	1,000	"	"	"	"	8270D
4-Bromophenyl phe	enyl ether		ND	U, A2, J	1,000	"	"	"	"	8270D
Hexachlorobenzene	•		ND	U, A2, J	1,000	"	"	"	"	8270D
Pentachlorophenol			ND	U, A2, C4, J, Q2, Q4	20,000	"	"	"	"	8270D
Phenanthrene			570	A2, C1, J	1,000	"	"	"	"	8270D
Anthracene			ND	U, A2, J	1,000	"	"	"	"	8270D
Carbazole			ND	U, A2, J, Q4	1,000	"	"	"	"	8270D
Di-n-butyl phthalate	e		580	A2, C1, J	1,000	"	"	"	"	8270D
Fluoranthene			1,300	A2, J, Q4	1,000	"	"	"	"	8270D
Pyrene			1,600	A2, J	1,000	"	"	"	"	8270D
Butyl benzyl phthal	ate		18,000	A2, J	1,000	"	"	"	"	8270D
Benzo(a)anthracene	2		600	A2, C1, J	1,000	"	"	"	"	8270D
3,3'-Dichlorobenzid	line		ND	U, Q4, A2, J, Q2	5,200	"	"	"	"	8270D
Chrysene	14114		<i>,</i>	J, Q6, A2	1,000	"	"			8270D
Bis(2-ethylhexyl) p			4,400	A2, J	1,000					8270D
Di-n-octyl phthalate Benzo(b)fluoranthe			ND 1,400	Q4	1,000 1,000					8270D 8270D
Benzo(k)fluoranthe			1,400 ND	A2, J U, A2, J, Q4			"			8270D 8270D
	lie				1,000 1,000	"				8270D
Benzo(a)pyrene Indeno(1,2,3-cd)pyr	rana		550 ND	A2, C1, J, Q4 U, A2, J, Q6						8270D 8270D
					1,000			"		
Dibenz(a,h)anthrace			ND	U, A2, J, Q4	1,000					8270D
Benzo(g,h,i)perylen	ne		880	Q4, Q6, A2, C1, J	1,000	"	"	"	"	8270D
Hexadecanoic acid			6,500	N TIC, J						8270D
Octadecanoic acid			4,100	N TIC, J						8270D
Surrogate: 2-Fluoro	ophenol			98 %	20-111%		"	"	"	
Surrogate: Phenol-o	d5			95 %	20-111%		"	"	"	
Surrogate: 2-Chlore	ophenol-d4			98 %	20-121%		"	"	"	
Surrogate: 1,2-Dich	hlorobenzene-d4			90 %	20-136%		"	"	"	
Surrogate: Nitrober	nzene-d5			91 %	20-125%		"	"	"	
Surrogate: 2-Fluoro	obiphenyl			87 %	20-121%		"	"	"	
Surrogate: 2,4,6-Tr	ibromophenol			116 %	20-146%		"	"	"	
Surrogate: Terphen	yl-d14			126 %	20-131%		"	"	"	
Sample ID: R	R0-4-0.5						Conventional C	hemistrv Pars	ameters by	APHA/EPA Methods
% Solids			99		1	%	B18E135	05/23/18	05/24/18	



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs, so	olids, low level			•				-	Analyzed: 05/16/18
Blank (B18E111-BLK1)				v	olatile Orga	nic Compou	inds by EP	A Method 826	C - Quality Control
Dichlorodifluoromethane	ND	C3, J, U	2.5	5 ug/kg wet					
Chloromethane	ND	U	2.5						
Vinyl chloride	ND	U	2.5	5 "					
Bromomethane	ND	U	2.5	5 "					
Chloroethane	ND	U	2.5	5 "					
Trichlorofluoromethane	ND	U	2.5	5 "					
1,1-Dichloroethene	ND	U	2.5	5 "					
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	U	2.5	5 "					
Acetone	ND	U	20) "					
Carbon disulfide	ND	U	2.5	5 "					
Dichloromethane	ND	U	2.5	5 "					
trans-1,2-Dichloroethene	ND	U	2.5	5 "					
tert-Butyl methyl ether (MTBE)	ND	U	10) "					
1,1-Dichloroethane	ND	U	2.5	5 "					
cis-1,2-Dichloroethene	ND	U	2.5	5 "					
2-Butanone (MEK)	ND	U	20) "					
Chloroform	ND	U	2.5	5 "					
1,1,1-Trichloroethane	ND	U	2.5	5 "					
Carbon tetrachloride	ND	U	2.5	5 "					
1,1-Dichloropropene	ND	U	2.5	5 "					
Benzene	ND	U	2.5						
1,2-Dichloroethane	ND	U	2.5	5 "					
Trichloroethene	ND	U	2.5						
1,2-Dichloropropane	ND	U	2.5						
Bromodichloromethane	ND	U	2.5						
cis-1,3-Dichloropropene	ND	U	2.5						
4-Methyl-2-pentanone (MIBK)	ND	U	20						
Toluene	ND	U	2.5						
trans-1,3-Dichloropropene	ND	U	2.5						
1,1,2-Trichloroethane	ND	U	2.5						
Tetrachloroethene	ND	U	2.5						
1,3-Dichloropropane	ND	U	2.5						
2-Hexanone	ND	U	20						
Chlorodibromomethane	ND	U	2.5	·					
1,2-Dibromoethane (EDB)	ND	U	2.:						
Chlorobenzene	ND	U	2.:						
Ethylbenzene	ND	U	2.:						
m&p-Xylene	ND	J, U		5 "					
o-Xylene	ND	у, 0 U	2.5						
Styrene	ND	U	2.:						
Bromoform		U	2.:						
BIOHOIOIII	ND	U	2.:	,					



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[Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
	Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
	Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
	Action		

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs, s	olids, low level							-	Analyzed: 05/16/1
Blank (B18E111-BLK1)				V	olatile Orga	inic Compou	inds by EP.	A Method 8260	C - Quality Contr
1,1,2,2-Tetrachloroethane	ND	U	2.5	; "					
1,2,3-Trichloropropane	ND	U	2.5	; "					
,3-Dichlorobenzene	ND	U	2.5	; "					
,4-Dichlorobenzene	ND	U	2.5	; "					
1,2-Dichlorobenzene	ND	U	2.5	; "					
1,2-Dibromo-3-chloropropane	ND	U	10) "					
Surrogate: 1,2-Dichloroethane-d4	2	27.2		"	25.0		109	63-144	
Surrogate: Toluene-d8	2	22.2		"	25.0		89	86-111	
Surrogate: 4-Bromofluorobenzene	1	24.4		"	25.0		98	81-110	
Surrogate: 1,2-Dichlorobenzene-d4		26.5		"	25.0		106	75-112	
LCS (B18E111-BS1)									
Dichlorodifluoromethane	26.4		2.5	ug/kg wet	25.0		106	75-120	
Chloromethane	25.6		2.5		25.0		102	69-137	
Vinyl chloride	26.6		2.5	; "	25.0		106	79-116	
Bromomethane	25.8		2.5	; "	25.0		103	76-132	
Chloroethane	25.9		2.5	; "	25.0		103	74-130	
Frichlorofluoromethane	27.2		2.5	; "	25.0		109	58-133	
1,1-Dichloroethene	26.8		2.5	; "	25.0		107	74-119	
1,1,2-Trichloro-1,2,2-trifluoroethane	28		2.5	; "	25.0		112	66-128	
Acetone	202		20) "	200		101	45-144	
Carbon disulfide	27		2.5	; "	25.0		108	70-130	
Dichloromethane	25		2.5	; "	25.0		100	20-200	
rans-1,2-Dichloroethene	27.3		2.5	; "	25.0		109	77-117	
ert-Butyl methyl ether (MTBE)	103		10) "	100		103	79-122	
1,1-Dichloroethane	26.6		2.5	; "	25.0		106	82-112	
cis-1,2-Dichloroethene	27		2.5	; "	25.0		108	68-124	
2-Butanone (MEK)	198		20) "	200		99	65-124	
Chloroform	26.2		2.5	; "	25.0		105	63-125	
,1,1-Trichloroethane	28.1		2.5	5 "	25.0		112	65-124	
Carbon tetrachloride	28.3		2.5	; "	25.0		113	54-130	
,1-Dichloropropene	26.5		2.5	; "	25.0		106	73-121	
Benzene	27		2.5	; "	25.0		108	81-117	
,2-Dichloroethane	26.4		2.5	; "	25.0		105	78-117	
Frichloroethene	26.5		2.5	; "	25.0		106	75-117	
,2-Dichloropropane	27.1		2.5	; "	25.0		109	76-120	
Bromodichloromethane	26.9		2.5	; "	25.0		108	67-122	
is-1,3-Dichloropropene	25.5		2.5	; "	25.0		102	51-136	
-Methyl-2-pentanone (MIBK)	208		20) "	200		104	73-123	
Toluene	28		2.5	; "	25.0		112	78-115	



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs	s, solids, low level							-	analyzed: 05/16/18
LCS (B18E111-BS1)				V	olatile Orga	anic Compou	nds by EP	A Method 82600	C - Quality Control
trans-1,3-Dichloropropene	25.4		2.5		25.0		102	42-140	
1,1,2-Trichloroethane	27.6		2.5		25.0		110	80-114	
Tetrachloroethene	28		2.5		25.0		112	75-116	
1,3-Dichloropropane	24.8		2.5		25.0		99	78-114	
2-Hexanone	189		20) "	200		94	59-132	
Chlorodibromomethane	26.6		2.5		25.0		106	56-132	
1,2-Dibromoethane (EDB)	25.6		2.5		25.0		102	70-123	
Chlorobenzene	27.4		2.5		25.0		110	80-113	
Ethylbenzene	28.3		2.5		25.0		113	64-127	
m&p-Xylene	60.9		5		50.0		122	64-124	
o-Xylene	29		2.5		25.0		116	48-137	
Styrene	29.5		2.5		25.0		118	49-133	
Bromoform	27.5		2.5		25.0		110	46-140	
1,1,2,2-Tetrachloroethane	26.3		2.5		25.0		105	70-121	
1,2,3-Trichloropropane	28		2.5		25.0		112	75-117	
1,3-Dichlorobenzene	27.8		2.5		25.0		111	65-122	
1,4-Dichlorobenzene	27.5		2.5		25.0		110	63-122	
1,2-Dichlorobenzene	26.7		2.5		25.0		107	72-118	
1,2-Dibromo-3-chloropropane	102		10		100		102	51-134	
Surrogate: 1,2-Dichloroethane-d4	25	.6		"	25.0		102	63-144	
Surrogate: Toluene-d8	27	7.6		"	25.0		111	86-111	
Surrogate: 4-Bromofluorobenzene	27	7.3		"	25.0		109	81-110	
Surrogate: 1,2-Dichlorobenzene-d4	27			"	25.0		110	75-112	
Matrix Spike (B18E111-MS1)		Source: 180	5029-04						
Dichlorodifluoromethane	37.1			ug/kg	38.1	ND	98	62-122	
Chloromethane	37.5		3.8	dry	38.1	ND	98	60-120	
Vinyl chloride	37.8		3.8		38.1	ND		62-122	
Bromomethane	37.8		3.8		38.1	ND		69-129	
Chloroethane	37.1		3.8		38.1	ND		66-126	
Trichlorofluoromethane	36.6		3.8		38.1	ND		64-124	
1,1-Dichloroethene			3.8		38.1	ND		63-123	
1,1,2-Trichloro-1,2,2-trifluoroethane	37.1		3.8		38.1	ND		63-123	
	35.6		3.8					57-117	
Acetone Dichloromethane	359		3.8		305 38.1	54.3 ND		48-110	
	36.2								
trans-1,2-Dichloroethene	36.3		3.8		38.1	ND		63-123 62 122	
tert-Butyl methyl ether (MTBE)	158		15		152	ND		62-122	
1,1-Dichloroethane	38.2		3.8		38.1	ND		62-122	
cis-1,2-Dichloroethene	37		3.8		38.1	ND		62-122	
2-Butanone (MEK)	286		30) "	305	ND	94	61-121	



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18135A **Reported:** 06/01/18 09:14

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD 1	RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs, so	olids, low level						-	red: 05/15/18 A	•	
Matrix Spike (B18E111-MS1)		Source: 1805	5029-04	V	olatile Orga	unic Compour	ids by EPA	A Method 8260C	C - Quality (Contro
Chloroform	38		3.8	"	38.1	ND	100	61-121		
1,1,1-Trichloroethane	41		3.8	"	38.1	ND	108	59-119		
Carbon tetrachloride	38.6		3.8		38.1	ND	101	59-119		
1,1-Dichloropropene	32.3		3.8		38.1	ND	85	63-123		
Benzene	37.4	Q7, J	3.8		38.1	ND	98	65-125		
1,2-Dichloroethane	37.8		3.8	"	38.1	ND	99	62-122		
Trichloroethene	31.4		3.8	"	38.1	ND	83	79-139		
1,2-Dichloropropane	37.2		3.8	"	38.1	ND	98	63-123		
Bromodichloromethane	35.4		3.8	"	38.1	ND	93	61-121		
cis-1,3-Dichloropropene	26.7		3.8	"	38.1	ND	70	61-121		
4-Methyl-2-pentanone (MIBK)	379		30	"	305	ND	124	62-122		
Toluene	42.6	Q7, J	3.8	"	38.1	ND	112	66-126		
trans-1,3-Dichloropropene	31.6		3.8	"	38.1	ND	83	60-120		
1,1,2-Trichloroethane	43.7		3.8	"	38.1	ND	115	59-119		
Tetrachloroethene	36.3		3.8	"	38.1	ND	95	64-124		
1,3-Dichloropropane	39.7		3.8	"	38.1	ND	104	62-122		
2-Hexanone	277		30	"	305	ND	91	64-124		
Chlorodibromomethane	37.7		3.8	"	38.1	ND	99	62-122		
1,2-Dibromoethane (EDB)	36.4		3.8	"	38.1	ND	96	61-121		
Chlorobenzene	34.1		3.8	"	38.1	ND	89	63-123		
Ethylbenzene	34.4	Q7, J	3.8	"	38.1	ND	90	67-127		
m&p-Xylene	71.7	Q7, J	7.6	"	76.1	ND	94	66-126		
o-Xylene	32.6	Q7, J	3.8	"	38.1	ND	86	66-126		
Styrene	32.1	Q7, J	3.8	"	38.1	ND	84	64-124		
Bromoform	34		3.8	"	38.1	ND	89	61-121		
1,1,2,2-Tetrachloroethane	32.8		3.8	"	38.1	ND	86	70-130		
1,2,3-Trichloropropane	37.7		3.8	"	38.1	ND	99	59-119		
1,3-Dichlorobenzene	20		3.8	"	38.1	ND	52	61-121		
1,4-Dichlorobenzene	19.5		3.8	"	38.1	ND	51	61-121		
1,2-Dichlorobenzene	17.1		3.8	"	38.1	ND	45	59-119		
1,2-Dibromo-3-chloropropane	89.5		15	"	152	ND	59	56-116		
Surrogate: 1,2-Dichloroethane-d4		26.2		"	25.0		105	63-144		
Surrogate: Toluene-d8		31.5		"	25.0		126	86-111		
Surrogate: 4-Bromofluorobenzene		21.8		"	25.0		87	81-110		
Surrogate: 1,2-Dichlorobenzene-d4		15.3		"	25.0 25.0			75-112		
Matrix Spike Dup (B18E111-MSD1)		15.5 Source: 1805	:020 04		25.0		61	/ 5-112		
Dichlorodifluoromethane	28.5	Source: 1803		ug/kg	32.2	ND	89	62-122	10	20
Chloromethane	31.1		3.2	dry "	32.2	ND	97	60-120	2	20
Vinyl chloride	29.4		3.2		32.2	ND	91	62-122	8	20



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section

75 Hawthorne Street

San Francisco CA, 94105

SDG: 18135A **Reported:** 06/01/18 09:14

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs, so	olids, low level						Prepa	red: 05/15/18 A	nalyzed: (05/16/1
Matrix Spike Dup (B18E111-MSD1)		Source: 1805	029-04	v	olatile Orga	nic Compour	nds by EPA	A Method 82600	C - Quality	Contr
Bromomethane	28.4		3.2	"	32.2	ND	88	69-129	0.2	2
Chloroethane	29.5		3.2	"	32.2	ND	92	66-126	6	2
Trichlorofluoromethane	28.5		3.2		32.2	ND	88	64-124	8	20
,1-Dichloroethene	28.9		3.2		32.2	ND	90	63-123	8	2
,1,2-Trichloro-1,2,2-trifluoroethane	27.8		3.2	"	32.2	ND	87	63-123	8	2
Acetone	276		26		257	54.3	86	57-117	15	2
Dichloromethane	28.1		3.2		32.2	ND	87	48-110	9	20
rans-1,2-Dichloroethene	27.6		3.2	"	32.2	ND	86	63-123	11	2
ert-Butyl methyl ether (MTBE)	122		13	"	129	ND	95	62-122	9	2
1,1-Dichloroethane	29.2		3.2	"	32.2	ND	91	62-122	10	2
cis-1,2-Dichloroethene	27.8		3.2	"	32.2	ND	86	62-122	12	2
2-Butanone (MEK)	215		26	"	257	ND	84	61-121	12	20
Chloroform	27.2		3.2	"	32.2	ND	85	61-121	16	20
1,1,1-Trichloroethane	31.6		3.2	"	32.2	ND	98	59-119	9	20
Carbon tetrachloride	29.7		3.2	"	32.2	ND	92	59-119	9	20
1,1-Dichloropropene	25.2		3.2	"	32.2	ND	78	63-123	8	2
Benzene	28.6	Q7, J	3.2		32.2	ND	89	65-125	10	2
1,2-Dichloroethane	29		3.2		32.2	ND	90	62-122	10	2
Trichloroethene	23.7		3.2	"	32.2	ND	74	79-139	11	2
,2-Dichloropropane	27.9		3.2		32.2	ND	87	63-123	12	2
Bromodichloromethane	26.7		3.2	"	32.2	ND	83	61-121	11	2
cis-1,3-Dichloropropene	21.8		3.2		32.2	ND	68	61-121	3	2
4-Methyl-2-pentanone (MIBK)	285		26		257	ND	111	62-122	12	2
Foluene	30.8	Q7, J	3.2	"	32.2	ND	96	66-126	16	2
rans-1,3-Dichloropropene	26.9		3.2	"	32.2	ND	84	60-120	0.8	2
1,1,2-Trichloroethane	32.7		3.2	"	32.2	ND	102	59-119	12	2
Fetrachloroethene	27		3.2	"	32.2	ND	84	64-124	13	2
1,3-Dichloropropane	30.7		3.2	"	32.2	ND	95	62-122	9	2
2-Hexanone	226		26	"	257	ND	88	64-124	4	2
Chlorodibromomethane	28.4		3.2	"	32.2	ND	88	62-122	12	2
,2-Dibromoethane (EDB)	29.9		3.2	"	32.2	ND	93	61-121	3	2
Chlorobenzene	26.6		3.2	"	32.2	ND	83	63-123	8	2
Ethylbenzene	26.9	Q7, J	3.2	"	32.2	ND	84	67-127	8	2
n&p-Xylene	55	Q7, J	6.4	. "	64.3	ND	85	66-126	10	2
o-Xylene	26.4	Q7, J	3.2		32.2	ND	82	66-126	4	2
Styrene	25	Q7, J	3.2	"	32.2	ND	78	64-124	8	2
Bromoform	25.8		3.2	"	32.2	ND	80	61-121	11	2
1,1,2,2-Tetrachloroethane	27.1		3.2		32.2	ND	84	70-130	2	2
,2,3-Trichloropropane	30		3.2	"	32.2	ND	93	59-119	6	2
,3-Dichlorobenzene	17.9		3.2	"	32.2	ND	56	61-121	6	2
,4-Dichlorobenzene	18.1		3.2	"	32.2	ND	56	61-121	9	2
,2-Dichlorobenzene	16.2		3.2	"	32.2	ND	50	59-119	12	20



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter Apr Action	il 2018 Removal				Response Se thorne Stree cisco CA, 94	et			SDG: 18135A rted: 06/01/1		
Quality Control											
Analyte	Result		Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E111 - 5035A VOA Solid - VOCs, solids	s, low level							Prepa	ared: 05/15/18 A	nalyzed:	05/16/18
Matrix Spike Dup (B18E111-MSD1)			Source: 1805	029-04	Ve	olatile Or	ganic Compoun	ds by EP.	A Method 8260C	C - Quality	Contro
1,2-Dibromo-3-chloropropane	83.1				13 "	129	ND	65	56-116	9	20
Surrogate: 1,2-Dichloroethane-d4	2	7.3			"	25.0		109	63-144		
Surrogate: Toluene-d8	2	9.6			"	25.0		118	86-111		
Surrogate: 4-Bromofluorobenzene	2	2.8			"	25.0		91	81-110		
Surrogate: 1,2-Dichlorobenzene-d4	1	7.9			"	25.0		71	75-112		
Batch B18E114 - 3545A ASE/PFE - TPH - Extrac	table							Prepa	ared: 05/16/18 A	nalyzed:	05/21/18
Blank (B18E114-BLK1)							Extractable	Petroleu	m Hydrocarbon	s - Quality	Contro
TPH - Diesel Range Organics	ND		U		5 mg/kg						
TPH - Oil Range Organics	ND		U		wet 20 "						
Surrogate: Hexacosane	3	.53			"	5.00		71	20-111		
LCS (B18E114-BS1)											
TPH - Diesel Range Organics	44.3				5 mg/kg wet	50.0		89	59-113		
Surrogate: Hexacosane	3	.99			"	5.00		80	20-111		
Matrix Spike (B18E114-MS1)			Source: 1805	029-04							
TPH - Diesel Range Organics	117				10 mg/kg dry	51.3	92.1	48	21-112		
Surrogate: Hexacosane	2	.49			"	5.13		49	20-111		
Matrix Spike Dup (B18E114-MSD1)			Source: 1805	029-04							
TPH - Diesel Range Organics	114				10 mg/kg dry	50.9	92.1	44	21-112	2	50
Surrogate: Hexacosane	2	.13			"	5.09		42	20-111		
Batch B18E115 - 3050B Sld Acid Dig - Metals by								Prepa	ared: 05/16/18 A	nalyzed:	05/23/18
Blank (B18E115-BLK1)							Metals by EPA	6000/7000) Series Methods	s - Quality	Contro
Arsenic	ND		U		2 mg/kg wet						
Barium	ND		U		5 "						
Cadmium	ND		U		0.5 "						
Chromium	ND		U		1 "						
Lead	ND		U		3 "						
Selenium	ND		U		2 "						

Matrix Spike (B18E115-MS2)

Silver

Source: 1805029-04

U

ND

1 "



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section 75 Hawthorne Street San Francisco CA, 94105 **SDG:** 18135A **Reported:** 06/01/18 09:14

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD I	RPD Limit
Batch B18E115 - 3050B Sld Acid Dig - Metals	by 6010						Prepa	red: 05/16/18	Analyzed: 05	5/23/18
					N	letals by EPA	6000/7000	Series Method	ls - Quality (Contro
Matrix Spike (B18E115-MS2)		Source: 180502								
Arsenic	422		2	mg/kg dry	402	12.1	102	75-125		
Barium	625		5.1	"	402	148	119	75-125		
Cadmium	11.4		0.51	"	10.0	1.53	98	75-125		
Chromium	155		1	"	40.2	55.5	248	75-125		
Lead	1,420	Q10	3	"	100	615	798	75-125		
Selenium	381		2	"	402	ND	95	75-125		
Silver	9.77		1	"	10.0	ND	97	75-125		
Matrix Spike Dup (B18E115-MSD2)		Source: 180502	9-04							
Arsenic	400		2	mg/kg dry	390	12.1	100	75-125	5	20
Barium	529		5.1	"	390	148	98	75-125	17	20
Cadmium	10.4		0.51	"	9.75	1.53	91	75-125	9	20
Chromium	124		1	"	39.0	55.5	175	75-125	22	20
Lead	859	Q10	3	"	97.5	615	251	75-125	49	20
Selenium	361		2	"	390	ND	93	75-125	5	20
Silver	9.38		1	"	9.75	ND	96	75-125	4	20
Reference (B18E115-SRM1)										
Arsenic	284		2	mg/kg wet	252		113	60.9-139		
Barium	ND	U	5	"	1.59			62.5-138		
Cadmium	10.7		0.5	"	10.9		98	70.6-128		
Chromium	28.5		1	"	27.0		106	68.3-132		
Lead	55.7		3	"	56.7		98	72.8-127		
Selenium	8.9		2	"	9.97		89	41-159		
Silver	5.81		1	"	5.88		99	45.8-154		

Metals by EPA 6000/7000 Series Methods - Quality Control

Mercury	1.14		0.034 mg/kg wet	1.10		104	80-120		
Reference (B18E116-SRM1)									
Mercury	0.771		0.027 mg/kg dry	0.463	0.252	112	80-120	23	20
Matrix Spike Dup (B18E116-MSD1)		Source: 1805029-04							
Mercury	0.653		0.025 mg/kg dry	0.450	0.252	89	80-120		
Matrix Spike (B18E116-MS1)		Source: 1805029-04							
Mercury	ND	U	0.025 mg/kg wet						

Batch B18E117 - 5035A TPHG - TPH - Purgeable

Prepared & Analyzed: 05/17/18

Blank (B18E117-BLK1)

Blank (B18E116-BLK1)

Purgeable Petroleum Hydrocarbons - Quality Control



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Eric Nuchims	Emergency Response Section	SDG:	18135A
Project Number: R18S51	75 Hawthorne Street	Reported:	06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105		
Action			

Analyte	Result		Qualifiers /	Quantitation	Units	Spike	Source	%REC	%REC	RPD	
			Comments	Limit	Onno	Level	Result	JULLE	Limits		Limit
Batch B18E117 - 5035A TPHG - TPH - Purgea	ble						Dungook	a Patrolo	Prepared & m Hydrocarbo	-	
Blank (B18E117-BLK1)							rurgeabi	e retroieu	III Hydrocarbol	us - Quanty	Contro
TPH - Gasoline Range Organics	ND		U		5 mg/kg wet						
Surrogate: a,a,a-Trifluorotoluene		112			"	125		89	76-124		
LCS (B18E117-BS1)											
TPH - Gasoline Range Organics	21,100				mg/kg wet	25000		84	78-119		
Surrogate: a,a,a-Trifluorotoluene		113			"	125		91	76-124		
Matrix Spike (B18E117-MS1)			Source: 1805	5029-04							
TPH - Gasoline Range Organics	29,000				mg/kg dry	25000	390	114	73-127		
Surrogate: a,a,a-Trifluorotoluene		113			"	125		91	76-124		
Matrix Spike (B18E117-MS2)			Source: 1805	5029-04							
TPH - Gasoline Range Organics	68.3				6 mg/kg dry	59.8	ND	114	73-127		
Surrogate: a,a,a-Trifluorotoluene		113			"	125		90	76-124		
Matrix Spike Dup (B18E117-MSD1)			Source: 1805	5029-04							
TPH - Gasoline Range Organics	25,500				mg/kg dry	25000	390	100	73-127	13	10
Surrogate: a,a,a-Trifluorotoluene		112			"	125		89	76-124		
Matrix Spike Dup (B18E117-MSD2)			Source: 1805	5029-04							
TPH - Gasoline Range Organics	66.8				6 mg/kg dry	59.8	ND	112	73-127	2	10
Surrogate: a,a,a-Trifluorotoluene		113			"	125		91	76-124		
Batch B18E118 - 3050B Sld Acid Dig - Metals	by 6010							-	ared: 05/17/18	-	
Blank (B18E118-BLK1)						N	etais by EPA	A 6000/ /000	0 Series Metho	us - Quanty	Contro
Arsenic	ND		U		2 mg/kg wet						
Barium	ND		U		5 "						
Cadmium	ND		U		0.5 "						
Chromium	ND		U		1 "						
Lead	ND		U		3 "						
Selenium	ND		U		2 "						
Silver	ND		U		1 "						
Reference (B18E118-SRM1)											
Arsenic	249				2 mg/kg wet	253		99	60.9-139		



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
3atch B18E118 - 3050B Sld Acid Dig - Metals by	6010						-	ured: 05/17/18 A	•	
Reference (B18E118-SRM1)					M	etals by EPA	X 6000/700 () Series Method	s - Quality	Contro
Barium	ND	U	5	"	1.60			62.5-138		
Cadmium	9.56		0.5	"	10.9		88	70.6-128		
Chromium	25.6		1	"	27.0		94	68.3-132		
Lead	49.3		3	"	56.8		87	72.8-127		
Selenium	8.21		2	"	9.98		82	41-159		
Silver	5.74		1	"	5.89		97	45.8-154		
Batch B18E120 - 3545A ASE/PFE - PCBs							Prepa	ared: 05/17/18 A	Analyzed: 0	5/22/18
					Polychlori	nated Biphe	nyls by EP.	A Method 8082	A - Quality	Contro
Blank (B18E120-BLK1)		T	12							
Aroclor 1016	ND	U	13	ug/kg wet						
Aroclor 1221	ND	U	27							
Aroclor 1232	ND	U	13	"						
Aroclor 1242	ND	U	13	"						
Aroclor 1248	ND	U	13	"						
Aroclor 1254	ND	U	13	"						
Aroclor 1260	ND	U	13	"						
Aroclor 1262	ND	U	13	"						
Aroclor 1268	ND	U	13	"						
Surrogate: Tetrachloro-m-xylene		55.7		"	66.7		84	20-140		
Surrogate: Decachlorobiphenyl		56.0		"	66.7		84	20-125		
LCS (B18E120-BS1)										
Aroclor-1016	58.4		13	ug/kg	66.7		88	62-111		
Aroclor-1260	(0.0		13	wet	66.7		91	56-124		
A100101-1200	60.9		15		00.7		91	50-124		
Surrogate: Tetrachloro-m-xylene		57.2		"	66.7		86	20-140		
Surrogate: Decachlorobiphenyl		57.4		"	66.7		86	20-125		
Matrix Spike (B18E120-MS1)		Source: 18050	29-04							
Aroclor-1016	40.8	504100110000		ug/kg	68.4	ND	60	20-134		
Aroclor-1260	63.7		13	dry "	68.4	22.9	60	20-139		
Surrogate: Tetrachloro-m-xylene		42.9		"	68.4		63	20-140		
Surrogate: Decachlorobiphenyl		34.8		"	68.4		51	20-125		
Matrix Spike Dup (B18E120-MSD1)		Source: 18050								
Aroclor-1016	38.3		13	ug/kg dry	68.0	ND	56	20-134	6	20
Aroclor-1260	60.3		13		68.0	22.9	55	20-139	5	20
Surrogate: Tetrachloro-m-xylene		38.9		"	68.0		57	20-140		



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Project Manager: Eric Nuchims Project Number: R18S51 Project: Bercovich Smelter Apri Action	l 2018 Removal		Emergency Re 75 Hawtho San Franciso	orne Stre	eet	SDG: 18135A Reported: 06/01/18 09:14				
Quality Control										
Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit	
Batch B18E120 - 3545A ASE/PFE - PCBs							-		Analyzed: 05/22/18	
Matrix Spike Dup (B18E120-MSD1)		Source: 1805	5029-04		Polychlori	nated Biphe	enyls by EP	A Method 8082	2A - Quality Control	
Surrogate: Decachlorobiphenyl	31	1.3		"	68.0		46	20-125		
Batch B18E126 - Soxhlet Extraction - SVOCs							Prep	ared: 05/21/18	Analyzed: 05/22/18	
				Semiv	olatile Orga	nic Compo	unds by EP	A Method 8270	D - Quality Control	
Blank (B18E126-BLK1)										
Phenol	ND	U	85	ug/kg wet						
Bis(2-chloroethyl)ether	ND	U	16							
2-Chlorophenol	ND	U	850) "						
1,3-Dichlorobenzene	ND	U	16) "						
1,4-Dichlorobenzene	ND	U	16) "						
Benzyl alcohol	ND	U	850) "						
1,2-Dichlorobenzene	ND	U	16) "						
2-Methylphenol	ND	U	850) "						
Bis(2-chloro-1-methylethyl) ether	ND	U	16) "						
3&4-Methylphenol	ND	U	850) "						
N-Nitrosodipropylamine	ND	U	16) "						
Hexachloroethane	ND	U	16) "						
Nitrobenzene	ND	U	16) "						
sophorone	ND	U	160) "						
2-Nitrophenol	ND	U	850) "						
2,4-Dimethylphenol	ND	U	850) "						
Bis(2-chloroethoxy)methane	ND	U	16) "						
2,4-Dichlorophenol	ND	U	850) "						
1,2,4-Trichlorobenzene	ND	U	160) "						
Naphthalene	ND	U	160) "						
4-Chloroaniline	ND	U	850) "						
Hexachlorobutadiene	ND	U	16) "						
4-Chloro-3-methylphenol	ND	U	850) "						
2-Methylnaphthalene	ND	U	16) "						
Hexachlorocyclopentadiene	ND	U	850) "						
2,4,6-Trichlorophenol	ND	U	850) "						
2,4,5-Trichlorophenol	ND	U	850) "						
2-Chloronaphthalene	ND	U	16) "						
2-Nitroaniline	ND	U	85							
Dimethyl phthalate	ND	U	16							
2,6-Dinitrotoluene	ND	U	16							
Acenaphthylene	ND	U	16							
3-Nitroaniline	ND	U	85							
Acenaphthene	ND	U	16							
2,4-Dinitrophenol	ND	C3, J, C4, Q2								
4-Nitrophenol	ND	U	85) "						



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							-		8 Analyzed: 05/22/18
Blank (B18E126-BLK1)				Semiv	olatile Orga	nic Compo	inds by EP	A Method 827	70D - Quality Contro
Dibenzofuran	ND	U	160	"					
2,4-Dinitrotoluene	ND	U	160						
Diethyl phthalate	ND	U	160						
Fluorene	ND	U	160						
4-Chlorophenyl phenyl ether	ND	U	160						
4-Nitroaniline	ND	Q2, J, U	850						
4,6-Dinitro-2-methylphenol	ND	U	850						
Diphenyl amine	ND	U	160						
4-Bromophenyl phenyl ether	ND	U	160						
Hexachlorobenzene	ND	U	160	"					
Pentachlorophenol	ND	C4, J, Q2, U	3,400	"					
Phenanthrene	ND	U	160						
Anthracene	ND	U	160						
Carbazole	ND	U	160						
Di-n-butyl phthalate	ND	U	160						
Fluoranthene	ND	U	160						
Pyrene	ND	U	160						
Butyl benzyl phthalate	ND	U	160						
Benzo(a)anthracene	ND	U	160	"					
3,3'-Dichlorobenzidine	ND	Q2, J, U	850						
Chrysene	ND	U	160						
Bis(2-ethylhexyl) phthalate	ND	U	160						
Di-n-octyl phthalate	ND	C3, J, U	160						
Benzo(b)fluoranthene	ND	U	160						
Benzo(k)fluoranthene	ND	U	160						
Benzo(a)pyrene	ND	U	160						
Indeno(1,2,3-cd)pyrene	ND	U	160						
Dibenz(a,h)anthracene	ND	U	160						
Benzo(g,h,i)perylene	ND	U	160	"					
Surrogate: 2-Fluorophenol	6	540		"	8330		78	20-111	
Surrogate: Phenol-d5		540		"	8330		80	20-111	
Surrogate: 2-Chlorophenol-d4				"			81		
		720		"	8330			20-121	
Surrogate: 1,2-Dichlorobenzene-d4		380		"	8330		77	20-136	
Surrogate: Nitrobenzene-d5		840			8330		82	20-125	
Surrogate: 2-Fluorobiphenyl		550		"	8330		80	20-121	
Surrogate: 2,4,6-Tribromophenol		580		"	8330		79	20-146	
Surrogate: Terphenyl-d14	8	880		"	8330		107	20-131	
LCS (B18E126-BS1)									
Phenol	1,350		850	ug/kg wet	1670		81	43-110	



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							Prepa	ared: 05/21/18 A	analyzed: 05/22/18
.CS (B18E126-BS1)				Semiv	olatile Orga	nic Compou	inds by EP.	A Method 82701) - Quality Contro
Bis(2-chloroethyl)ether	275		160		333		83	47-110	
-Chlorophenol	1,420		850		1670		85	42-110	
,3-Dichlorobenzene	277		160		333		83	37-110	
,4-Dichlorobenzene	277		160	"	333		82	39-110	
enzyl alcohol	1,240		850	"	1670		74	31-110	
,2-Dichlorobenzene	285		160		333		86	40-110	
-Methylphenol	1,260		850		1670		76	42-110	
Bis(2-chloro-1-methylethyl) ether	288		160		333		86	44-110	
&4-Methylphenol	1,380		850		1670		82	49-110	
J-Nitrosodipropylamine	283		160		333		85	42-110	
Iexachloroethane	303		160	"	333		91	38-110	
litrobenzene	377		160	"	333		113	48-110	
sophorone	283		160	"	333		85	43-110	
-Nitrophenol	1,440		850	"	1670		86	44-110	
,4-Dimethylphenol	967		850	"	1670		58	24-110	
is(2-chloroethoxy)methane	302		160	"	333		91	45-110	
4-Dichlorophenol	1,480		850	"	1670		89	48-110	
2,4-Trichlorobenzene	300		160	"	333		90	43-110	
laphthalene	280		160	"	333		84	45-110	
-Chloroaniline	1,000		850	"	1670		60	20-110	
exachlorobutadiene	323		160	"	333		97	42-110	
-Chloro-3-methylphenol	1,370		850	"	1670		82	50-110	
-Methylnaphthalene	277		160	"	333		83	45-110	
Iexachlorocyclopentadiene	1,220		850	"	1670		73	32-110	
,4,6-Trichlorophenol	1,480		850	"	1670		89	47-110	
,4,5-Trichlorophenol	1,480		850	"	1670		89	52-112	
-Chloronaphthalene	298		160	"	333		90	47-110	
-Nitroaniline	1,490		850	"	1670		89	58-118	
imethyl phthalate	295		160	"	333		89	63-123	
,6-Dinitrotoluene	302		160	"	333		91	56-116	
cenaphthylene	272		160	"	333		82	49-110	
Nitroaniline	1,120		850	"	1670		67	29-110	
cenaphthene	328		160	"	333		98	72-132	
4-Dinitrophenol	ND	U	3,400	"	1670			30-110	
Nitrophenol	1,500		850	"	1670		90	67-127	
ibenzofuran	308		160	"	333		92	52-112	
4-Dinitrotoluene	303		160	"	333		91	63-123	
hiethyl phthalate	308		160	"	333		92	70-130	
uorene	292		160	"	333		88	54-114	
-Chlorophenyl phenyl ether	308		160	"	333		92	53-113	
Nitroaniline	890		850	"	1670		53	56-116	
6-Dinitro-2-methylphenol	1,200		850		1670		72	50-110	



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							Prepa	ared: 05/21/18 A	Analyzed: 05/22/18
				Semiv	olatile Orga	nic Compou	inds by EP.	A Method 8270I) - Quality Control
LCS (B18E126-BS1) Diphenyl amine	142	C1, J	160	"	333		43	39-110	
4-Bromophenyl phenyl ether	142 317	01,5	160		333		95	52-112	
Hexachlorobenzene	308		160		333		92	52-112	
Pentachlorophenol	ND	U	3,400		1670)2	49-110	
Phenanthrene	300	0	160		333		90	55-115	
Anthracene	295		160		333		89	57-117	
Carbazole	272		160		333		82	53-113	
Di-n-butyl phthalate	305		160		333		92	72-132	
Fluoranthene	303		160		333		91	63-123	
Pyrene	318		160		333		96	60-120	
Butyl benzyl phthalate	330		160		333		99	64-124	
Benzo(a)anthracene	335		160		333		100	60-120	
3,3'-Dichlorobenzidine	ND	U	850		1330			20-110	
Chrysene	328		160		333		98	61-121	
Bis(2-ethylhexyl) phthalate	302		160		333		91	76-136	
Di-n-octyl phthalate	278		160		333		84	70-130	
Benzo(b)fluoranthene	302		160	"	333		91	60-120	
Benzo(k)fluoranthene	300		160	"	333		90	64-124	
Benzo(a)pyrene	290		160	"	333		87	57-117	
Indeno(1,2,3-cd)pyrene	285		160	"	333		86	62-122	
Dibenz(a,h)anthracene	280		160	"	333		84	64-124	
Benzo(g,h,i)perylene	300		160	"	333		90	58-118	
Surrogate: 2-Fluorophenol	717	0		"	8330		86	20-111	
Surrogate: Phenol-d5	735	0		"	8330		88	20-111	
Surrogate: 2-Chlorophenol-d4	738	0		"	8330		89	20-121	
Surrogate: 1,2-Dichlorobenzene-d4	698	0		"	8330		84	20-136	
Surrogate: Nitrobenzene-d5	750	0		"	8330		90	20-125	
Surrogate: 2-Fluorobiphenyl	737	0		"	8330		88	20-121	
Surrogate: 2,4,6-Tribromophenol	777	0		"	8330		93	20-146	
Surrogate: Terphenyl-d14	942	0		"	8330		113	20-131	
Matrix Spike (B18E126-MS1)		Source: 1805	029-04						
Phenol	10,200		5,600	ug/kg	11000	ND	93	43-110	
Bis(2-chloroethyl)ether	2,180		1,100	dry "	2200	ND	99	47-110	
2-Chlorophenol	10,500		5,600		11000	ND		42-110	
1,3-Dichlorobenzene	2,060		1,100		2200	ND		37-110	
1,4-Dichlorobenzene	2,070		1,100		2200	ND		39-110	
Benzyl alcohol	8,910		5,600		11000	ND		31-110	
1,2-Dichlorobenzene	2,100		1,100		2200	ND		40-110	



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Project Manager:	Eric Nuchims
Project Number:	R18S51
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	Action

Emergency Response Section

SDG: 18135A **Reported:** 06/01/18 09:14

75 Hawthorne Street San Francisco CA, 94105

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							Prepa	ared: 05/21/18	Analyzed: 05/23/18
		G 100	1000 04	Semiv	olatile Orga	nic Compou	nds by EP.	A Method 8270	D - Quality Contro
Matrix Spike (B18E126-MS1)		Source: 1805			2200		102	44 110	
Bis(2-chloro-1-methylethyl) ether	2,270		1,100		2200	ND		44-110	
3&4-Methylphenol	11,500		5,600		11000	ND		49-110	
N-Nitrosodipropylamine	2,190		1,100		2200	ND		42-110	
Hexachloroethane	1,570		1,100		2200	ND		38-110	
Nitrobenzene	2,330		1,100		2200	ND		48-110	
Isophorone	2,250		1,100		2200	ND		43-110	
2-Nitrophenol	9,250		5,600		11000	ND		44-110	
2,4-Dimethylphenol	10,400		5,600	"	11000	ND	95	24-110	
Bis(2-chloroethoxy)methane	2,100		1,100	"	2200	ND	96	45-110	
2,4-Dichlorophenol	10,500		5,600	"	11000	ND		48-110	
1,2,4-Trichlorobenzene	2,120		1,100	"	2200	ND	97	43-110	
Naphthalene	2,230		1,100	"	2200	ND	102	45-110	
4-Chloroaniline	ND	U	5,600	"	11000	ND		20-110	
Hexachlorobutadiene	2,080		1,100	"	2200	ND	95	42-110	
4-Chloro-3-methylphenol	10,400		5,600	"	11000	ND	95	50-110	
2-Methylnaphthalene	2,190		1,100	"	2200	ND	100	45-110	
Hexachlorocyclopentadiene	ND	U	5,600	"	11000	ND		32-110	
2,4,6-Trichlorophenol	10,400		5,600	"	11000	ND	94	47-110	
2,4,5-Trichlorophenol	10,900		5,600	"	11000	ND	99	52-112	
2-Chloronaphthalene	2,110		1,100	"	2200	ND	96	47-110	
2-Nitroaniline	10,500		5,600	"	11000	ND	96	58-118	
Dimethyl phthalate	2,220		1,100	"	2200	ND	101	63-123	
2,6-Dinitrotoluene	2,190		1,100		2200	ND	100	56-116	
Acenaphthylene	2,250		1,100		2200	ND		49-110	
3-Nitroaniline	3,280	C1, J	5,600		11000	ND		29-110	
Acenaphthene	2,250	,	1,100		2200	ND		72-132	
2,4-Dinitrophenol	2,230 ND	U	22,000		11000	ND		30-110	
4-Nitrophenol	10,600	U U	5,600		11000	ND		67-127	
Dibenzofuran	2,440		1,100		2200	ND		52-112	
2,4-Dinitrotoluene	2,380		1,100		2200	ND		63-123	
Diethyl phthalate	2,380		1,100		2200	ND		70-130	
Fluorene	2,400		1,100		2200	ND		54-114	
4-Chlorophenyl phenyl ether			1,100		2200	ND		53-114	
4-Chiorophenyi phenyi ether 4-Nitroaniline	2,210	C1, J	5,600		11000	ND ND		56-116	
4-Nitroanline 4,6-Dinitro-2-methylphenol	4,630	C1, J C1, J	5,600		11000	ND ND		50-110	
	2,980	C1, J	5,600 1,100		2200	ND ND		39-110 39-110	
Diphenyl amine	2,320								
4-Bromophenyl phenyl ether	2,210		1,100		2200	ND		52-112	
Hexachlorobenzene	2,180	TT	1,100		2200	ND		52-112	
Pentachlorophenol	ND	U	22,000		11000	ND		49-110	
Phenanthrene	2,750		1,100		2200	569		55-115	
Anthracene	2,530		1,100		2200	ND		57-117	
Carbazole	2,750		1,100	"	2200	ND	125	53-113	



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Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
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Emergency Response Section

SDG: 18135A **Reported:** 06/01/18 09:14

75 Hawthorne Street San Francisco CA, 94105

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD R L	.PD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							-	red: 05/21/18	-	
Aatrix Spike (B18E126-MS1)		Source: 18	05029-04	Semiv	olatile Orga	nic Compour	nds by EPA	A Method 8270	D - Quality C	ontro
Di-n-butyl phthalate	2,330		1,10	0 "	2200	579	80	72-132		
luoranthene	2,980		1,10	0 "	2200	1,310	76	63-123		
yrene	3,390		1,10	0 "	2200	1,570	82	60-120		
utyl benzyl phthalate	3,620		1,10	0 "	2200	18,000	NR	64-124		
enzo(a)anthracene	2,990		1,10	0 "	2200	599	109	60-120		
3'-Dichlorobenzidine	ND	U	5,60	0 "	8800	ND		20-110		
hrysene	3,880		1,10	0 "	2200	1,410	112	61-121		
is(2-ethylhexyl) phthalate	6,730		1,10	0 "	2200	4,430	105	76-136		
i-n-octyl phthalate	3,500		1,10	0 "	2200	ND	159	70-130		
enzo(b)fluoranthene	4,320		1,10	0 "	2200	1,430	131	60-120		
enzo(k)fluoranthene	3,330		1,10	0 "	2200	ND	152	64-124		
enzo(a)pyrene	2,740		1,10	0 "	2200	ND	124	57-117		
deno(1,2,3-cd)pyrene	1,830		1,10	0 "	2200	ND	83	62-122		
Dibenz(a,h)anthracene	1,590		1,10	0 "	2200	ND	72	64-124		
enzo(g,h,i)perylene	2,230		1,10	0 "	2200	884	61	58-118		
		(0.0		"						
urrogate: 2-Fluorophenol		400			55000		95	20-111		
urrogate: Phenol-d5		500		"	55000		95	20-111		
urrogate: 2-Chlorophenol-d4	53	100		"	55000		97	20-121		
urrogate: 1,2-Dichlorobenzene-d4	49	100		"	55000		89	20-136		
urrogate: Nitrobenzene-d5	48	800		"	55000		89	20-125		
urrogate: 2-Fluorobiphenyl	47	600		"	55000		87	20-121		
urrogate: 2,4,6-Tribromophenol	64	300		"	55000		117	20-146		
urrogate: Terphenyl-d14	63	200		"	55000		115	20-131		
1atrix Spike Dup (B18E126-MSD1)		Source: 18	05029-04							
henol	9,650		5,40	0 ug/kg	10600	ND	91	43-110	5	20
is(2-chloroethyl)ether	2,050		1,10	dry 0 "	2130	ND	96	47-110	6	20
Chlorophenol	10,100		5,40	0 "	10600	ND	95	42-110	4	20
3-Dichlorobenzene	1,980		1,10	0 "	2130	ND	93	37-110	4	20
4-Dichlorobenzene	1,960		1,10	0 "	2130	ND	92	39-110	6	20
enzyl alcohol	8,640		5,40		10600	ND	81	31-110	3	20
2-Dichlorobenzene	1,960		1,10	0 "	2130	ND	92	40-110	7	20
Methylphenol	9,360		5,40		10600	ND	88	42-110	7	20
is(2-chloro-1-methylethyl) ether	2,230		1,10	0 "	2130	ND	105	44-110	1	20
&4-Methylphenol	10,800		5,40	0 "	10600	ND	101	49-110	6	20
-Nitrosodipropylamine	2,140		1,10	0 "	2130	ND	100	42-110	2	20
exachloroethane	1,360		1,10	0 "	2130	ND	64	38-110	14	20
itrobenzene	2,230		1,10	0 "	2130	ND	105	48-110	4	20
ophorone	2,080		1,10	0 "	2130	ND	98	43-110	8	20
-Nitrophenol	8,770		5,40		10600	ND	82	44-110	5	20



1337 S. 46th Street, Building 201, Richmond, CA 94804 Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section

SDG: 18135A **Reported:** 06/01/18 09:14

75 Hawthorne Street San Francisco CA, 94105

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							Prepa	ared: 05/21/18 A	analyzed: 0	5/23/18
Materia Saila Dara (D19E13(MED1)		Source: 1805	020.04	Semiv	olatile Orga	nic Compou	nds by EP	A Method 82701) - Quality	Control
Matrix Spike Dup (B18E126-MSD1) 2,4-Dimethylphenol	0.450	Source: 1805	029-04 5,400	"	10600	ND	89	24-110	10	20
Bis(2-chloroethoxy)methane	9,450		1,100		2130	ND	99	45-110	0.7	20
2,4-Dichlorophenol	2,120		5,400		10600	ND	92	43-110	7	20
1,2,4-Dichlorobenzene	9,760		1,100		2130	ND	92 95	43-110	6	20
Naphthalene	2,010		1,100		2130	ND	95 99	45-110	5	20
4-Chloroaniline	2,120	U	5,400		10600	ND	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	20-110	5	20
Hexachlorobutadiene	ND	0	1,100		2130	ND	93	42-110	4	20
	1,990					ND		42-110 50-110	4	
4-Chloro-3-methylphenol	9,720		5,400		10600 2130	ND	91 95	45-110	9	20
2-Methylnaphthalene	2,010	U	1,100			ND	93		9	20
Hexachlorocyclopentadiene	ND	U	5,400		10600		02	32-110	4	20
2,4,6-Trichlorophenol	9,940		5,400		10600	ND	93	47-110	4	20
2,4,5-Trichlorophenol	10,200		5,400		10600	ND	96	52-112	6	20
2-Chloronaphthalene	2,060		1,100		2130	ND	97	47-110	2	20
2-Nitroaniline	10,400		5,400		10600	ND		58-118	0.6	20
Dimethyl phthalate	2,130		1,100		2130	ND		63-123	4	20
2,6-Dinitrotoluene	1,980		1,100		2130	ND		56-116	10	20
Acenaphthylene	2,150		1,100		2130	ND		49-110	5	20
3-Nitroaniline	2,810	C1, J	5,400		10600	ND		29-110	15	20
Acenaphthene	2,090		1,100		2130	ND	98	72-132	7	20
2,4-Dinitrophenol	ND	U	21,000		10600	ND		30-110		20
4-Nitrophenol	9,720		5,400		10600	ND	91	67-127	9	20
Dibenzofuran	2,310		1,100		2130	ND	108	52-112	6	20
2,4-Dinitrotoluene	2,210		1,100		2130	ND	104	63-123	7	20
Diethyl phthalate	2,240		1,100		2130	ND	106	70-130	7	20
Fluorene	2,170		1,100		2130	ND	102	54-114	6	20
4-Chlorophenyl phenyl ether	2,170		1,100		2130	ND	102	53-113	2	20
4-Nitroaniline	4,490	C1, J	5,400		10600	ND	42	56-116	3	20
4,6-Dinitro-2-methylphenol	ND	U	5,400		10600	ND		50-110		20
Diphenyl amine	2,300		1,100		2130	ND	108	39-110	1	20
4-Bromophenyl phenyl ether	2,130		1,100		2130	ND	100	52-112	4	20
Hexachlorobenzene	2,050		1,100		2130	ND	96	52-112	6	20
Pentachlorophenol	ND	U	21,000		10600	ND		49-110		20
Phenanthrene	2,530		1,100		2130	569		55-115	8	20
Anthracene	2,300		1,100		2130	ND		57-117	10	20
Carbazole	2,430		1,100		2130	ND		53-113	12	20
Di-n-butyl phthalate	2,270		1,100		2130	579	80	72-132	2	20
Fluoranthene	2,490		1,100		2130	1,310	55	63-123	18	20
Pyrene	3,200		1,100		2130	1,570	76	60-120	6	20
Butyl benzyl phthalate	3,960		1,100	"	2130	18,000	NR	64-124	9	20
Benzo(a)anthracene	2,560		1,100	"	2130	599	92	60-120	15	20
3,3'-Dichlorobenzidine	ND	U	5,400	"	8500	ND		20-110		20
Chrysene	3,080		1,100	"	2130	1,410	79	61-121	23	20



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Project Manager:	Eric Nuchims
Project Number:	R18S51
Project:	Bercovich Smelter April 2018 Removal
	Action

Emergency Response Section 75 Hawthorne Street

SDG: 18135A **Reported:** 06/01/18 09:14

San Francisco CA, 94105

Quality Control

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Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B18E126 - Soxhlet Extraction - SVOCs							Prepa	red: 05/21/18	Analyzed: 0	5/23/18
				Semiv	olatile Orga	nic Compour	nds by EPA	A Method 8270	D - Quality	Control
Matrix Spike Dup (B18E126-MSD1)		Source: 1805								
Bis(2-ethylhexyl) phthalate	7,170		1,100		2130	4,430	129	76-136	6	20
Di-n-octyl phthalate	4,050		1,100	"	2130	ND	190	70-130	15	20
Benzo(b)fluoranthene	3,830		1,100		2130	1,430	113	60-120	12	20
Benzo(k)fluoranthene	3,140		1,100	"	2130	ND	148	64-124	6	20
Benzo(a)pyrene	2,530		1,100		2130	549	93	57-117	8	20
Indeno(1,2,3-cd)pyrene	1,410		1,100	"	2130	ND	66	62-122	25	20
Dibenz(a,h)anthracene Benzo(g,h,i)perylene	1,340		1,100 1,100		2130 2130	ND 884	63 33	64-124 58-118	17 33	20 20
	1,590		1,100		2100			20 110		20
Surrogate: 2-Fluorophenol	49	800		"	53100		94	20-111		
Surrogate: Phenol-d5	49	800		"	53100		94	20-111		
Surrogate: 2-Chlorophenol-d4	51	100		"	53100		96	20-121		
Surrogate: 1,2-Dichlorobenzene-d4	46	900		"	53100		87	20-136		
Surrogate: Nitrobenzene-d5	46.	300		"	53100		87	20-125		
Surrogate: 2-Fluorobiphenyl	46	700		"	53100		88	20-121		
Surrogate: 2,4,6-Tribromophenol	60-	400		"	53100		114	20-146		
Surrogate: Terphenyl-d14	65.	500		"	53100		123	20-131		
Batch B18E135 - Solids, Dry Weight (Prep) - Solids, Weight	Dry		С	onventio	nal Chemist	ry Paramete	-	red: 05/23/18 A A/EPA Method	•	
Blank (B18E135-BLK1)										
% Solids	ND	U	1	%						
Duplicate (B18E135-DUP1)		Source: 1805	029-04							
% Solids	99		1	%		99			0.09	20



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Project Manager: Eric Nuchims	Emergency Response Section	SDG: 18135A
Project Number: R18S51	75 Hawthorne Street	Reported: 06/01/18 09:14
Project: Bercovich Smelter April 2018 Removal	San Francisco CA, 94105	
Action		

Qualifiers and Comments

- Q7 Surrogate spike recoveries for this sample were outside control limits.
- Q6 Matrix spike/matrix spike duplicate precision criteria were not met for this analyte (see MS/MSD results for this batch in QC summary).
- Q4 The matrix spike and/or matrix spike duplicate associated with this sample did not meet recovery criteria for this analyte (see MS/MSD results for this batch in QC summary)
- Q2 The laboratory control standard associated with this sample did not meet recovery criteria for this analyte (see LCS results for this batch in QC summary).
- Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.
- Q1 The internal standard associated with this analyte did not meet area count criteria.
- N TIC Tentatively Idenitified Compound This compound was identified only by match with mass spectral library. Identification and quantitation should be considered tentative and presumptive.
 - J The reported result for this analyte should be considered an estimated value.
 - F13 Fuel or Product Type: mixed or unknown
 - C4 The calibration verification check did not meet % difference criteria for this analyte.
 - C3 The initial calibration for this analyte did not meet calibration criteria.
 - C1 The reported concentration for this analyte is below the quantitation limit.
 - A2 The sample was received above the recommended temperature range.
 - U Not Detected
 - NR Not Reported
- RE1, RE2, etc: Result is from a sample re-analysis.