FREEPORT-McMoRan

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June 2, 2020

Certified Mail #70182290000160738327
Return Receipt Requested

Ms. Rebecca Roose, Director
Water Protection Division
New Mexico Environment Department
P.O. Box 5469
Santa Fe, New Mexico 87502

Dear Ms.Roose:

Re: Hurley Soils Investigation Unit (HSIU)
Completion Report Supplemental Addendum – Chino AOC

Freeport-McMoRan Chino Mines Company (Chino) submits under separate cover the *Completion Report Supplemental Addendum for the Hurley Soil Investigation Unit* (HSIU) under the Chino Administrative Order on Consent (AOC). This report documents analytical data and the remediation of an additional residential property in the town of Hurley, New Mexico during 2014 through 2019 yard sampling and remedial actions. This supplemental report is an addendum to the 2008 *Interim Remedial Action Completion Report for* HSIU. This report was submitted today to Mr. David Mercer in electronic form via email.

Please contact Ms. Pam Pinson at (575) 912-5213 with any questions or comments concerning this completion report.

Sincerely,

Sherry Burt-Kested
Manager, Environmental Services

SBK:pp
20200602-001

c: (via email)
Joseph Fox, NMED
David Mercer, NMED
Petra Sanchez, US EPA
Mike Steward, FCX

HURLEY SOILS INVESTIGATION UNIT COMPLETION REPORT SUPPLEMENTAL ADDENDUM

Analytical Data and Sample Locations for 2017 through 2019 Yard Sampling and Remedial Actions

Submitted to:

Freeport-McMoRan Chino Mines Company
99 Santa Rita Mine Road
Vanadium, New Mexico 88023

Submitted by:

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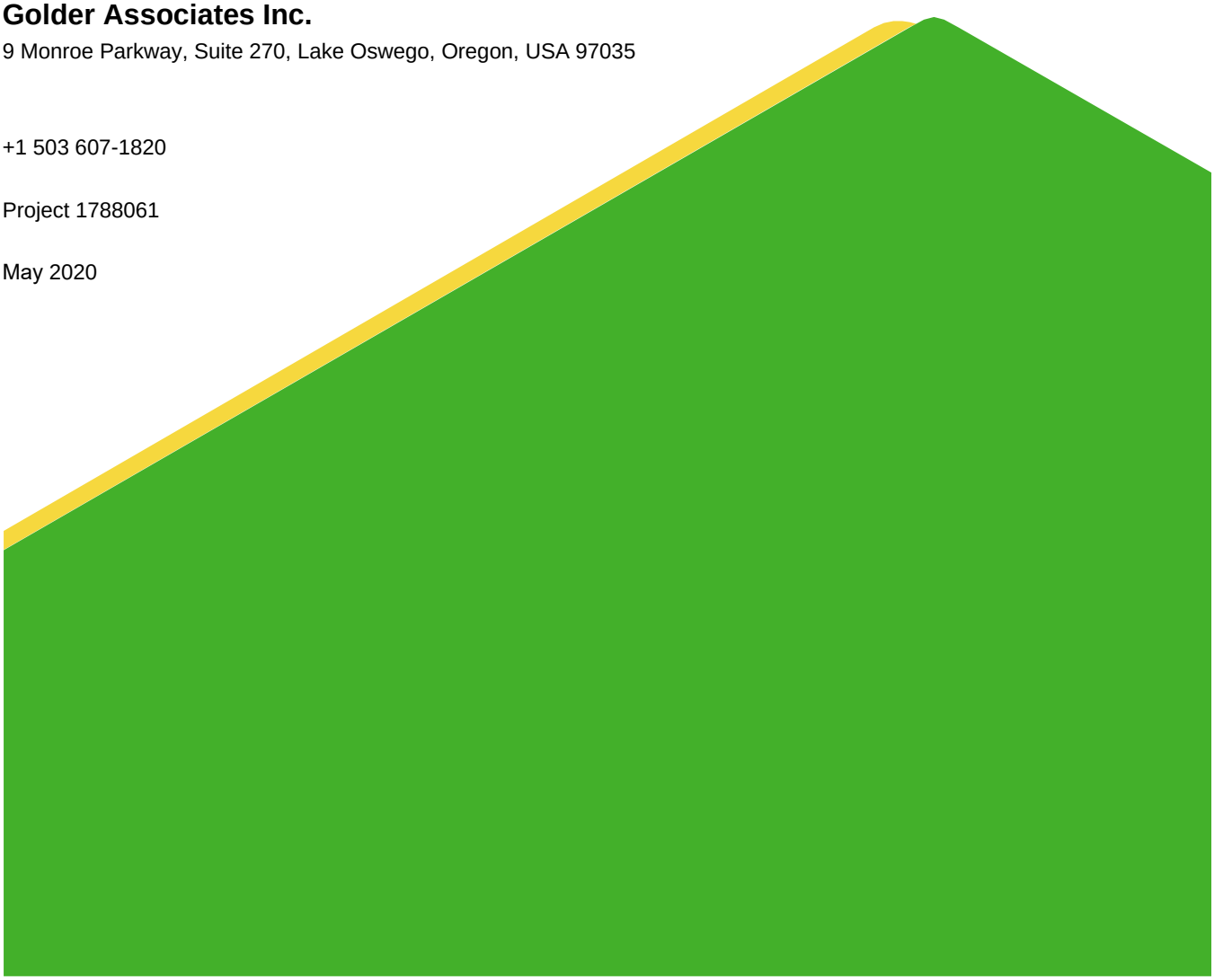
Project 1788061

May 2020



Distribution List

Pam Pinson, Freeport-McMoRan Chino Mines Co.

David Mercer, New Mexico Environment Department (NMED)

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1.0 INTRODUCTION

This supplemental addendum report to the Completion Report for the Hurley Soils Investigation Unit (HSIU) Interim Remedial Action (Golder, 2008) documents three field efforts completed by Freeport-McMoRan Chino Mines Company (Chino) between 2017 and 2019 in residential yards in Hurley, New Mexico. Chino's consultant, Golder Associates (Golder) performed oversight of soil removal, initial and confirmation soil sampling, and X-Ray Fluorescence (XRF) analysis for seven residential properties under the HSIU Interim Remedial Action (IRA) Work Plan (Golder 2006, "Work Plan). The HSIU, and remedial actions performed therein, are under the Administrative Order on Consent (AOC), a binding agreement dated December 1994, between Freeport-McMoRan Chino Mines Company (Chino) and the New Mexico Environment Department (NMED). Sampling and remediation activities presented in this supplemental addendum report were conducted as supplemental characterization and remediation to the 2006 IRA to address copper concentrations in soil resulting from historical copper processing facilities near Hurley.

The NMED issued Pre-Feasibility Study Remedial Action Criterion (RAC) for the HSIU of 5,000 milligrams per kilogram (mg/kg) of copper in soil at private, commercial, and public developed properties to protect human health on July 27, 2005. The final RAC was defined as 5,000 mg/kg copper in the NMED Record of Decision (ROD) for the HSIU dated September 2009. The RAC was used as the target remediation level for the HSIU. The remedial action selected for HSIU was soil excavation with restoration using clean fill and landscaping materials for properties where soil copper concentrations were higher than the RAC. In 2006, Golder revised the remediation decision making criterion for the XRF results from 5,000 mg/kg for copper to 4,500 mg/kg with NMED concurrence. This was based on review of XRF results against laboratory confirmation sample results available at that time, as described in Appendix F of the Completion Report. The review indicated that the XRF was performing within acceptable performance criteria; however, there were several false negative occurrences (i.e., the XRF predicted no remediation was needed when the laboratory split result indicated remediation was needed). The number of occurrences of the false negative error was substantially decreased by lowering the XRF decision criterion to 4,500 mg/kg to represent the RAC of 5,000 mg/kg as shown in Figure F-3 of the Completion Report (Golder 2008).

The HSIU IRA was conducted primarily between March 2006 and August 2007; however, eleven residential properties were not addressed, or only partially addressed, at the time due to non-Chino private property access issues. In 2014, five additional properties were remediated, as detailed in the HSIU Completion Report Addendum (Golder 2015), leaving six properties that had not been addressed. Five of the six properties had not been previously sampled, and one had been sampled, but only partially remediated as summarized below. During the 2017 through 2019 field efforts, the properties were addressed as follows:

- Properties sampled in 2017:
  - 502 D Street – Copper concentrations exceeded the RAC, remediation was declined.
  - 305 Nevada Avenue – Copper concentrations were below the RAC, remediation was not required.
  - 102 Pattie Avenue – Copper concentrations were below the RAC, remediation was not required.
- Properties sampled in 2018:
  - 102 Romero Avenue – Copper concentrations exceeded the RAC, remediation was declined.
  - 314 Romero Avenue – Copper concentrations exceeded the RAC, remediation was declined.

- Property remediation completed:
  - 2/3 Santa Rita Avenue – Back yards remediated, no additional action required.

Figure 1 shows the locations of these properties in Hurley. This report presents the confirmation sampling locations and results, including sampling results for borrow soils placed in the yards during restoration.

Remedial activities at the 2/3 Santa Rita Avenue property, which includes two homes, had been previously been conducted in the front yards. During August 2019, the back yards were remediated by excavating soil in areas containing elevated copper concentrations, hauling excavated soil to a permitted onsite facility location (West Stockpile DP-526), and restoring each yard.

The soils were removed daily from the property and temporarily staged at the Lake One Road Mile Marker 4 temporary staging site supporting the 2019 Whitewater Creek IRA. The removed soil was later hauled directly to the West Stockpile along with the Whitewater Creek IRA material. A total of approximately 60 cubic yards of Hurley IRA soils were placed on the West Stockpile in a designated location as approved by NMED (email from Brad Reid, NMED, August 9, 2019) under Discharge Permit 526.

All procedures implemented during the 2019 remedial activities, including field oversight, health and safety procedures, dust suppression and air monitoring, sample collection methods, XRF analyses, laboratory quality assurance methods, and coordination with the NMED were consistent with the Work Plan (Golder 2006) and the supporting Health and Safety Plan Addendum (Golder 2006).

As a follow up to the 2009 Hurley IU ROD, Chino continued to make good faith efforts to gain access for sampling and remediation on non-Chino properties. Following 2019 remediation activities including sampling, three Hurley residential properties still remain with copper concentrations exceeding the RAC due to lack of access permission. Chino, as a private corporation, does not have legal authority to require property owners to allow access to complete remediation activities.

2.0 XRF CONFIRMATION SAMPLING

Each property was sampled on a 20-foot grid during implementation of the IRA in 2006 as well as the 2017 and 2018 sampling events (Round 1 sampling). Round 1 copper results are shown on the “Initial Results” map for each property in Appendix A.

Round 2 sampling occurred after excavation and prior to restoration to confirm that the RAC were achieved. If the Round 2 results indicated that the target goal was not attained, further excavation was conducted, and additional rounds of sampling occurred until the target goal was attained.

The yard samples (2017 to 2019) were dried and sieved at Golder’s field laboratory located in a Chino Hurley Operations office or at the Golder Silver City Office, and XRF analysis was performed for copper and iron concentrations. Both offices provided the required safety zoning and ventilation for processing samples and utilizing the XRF. These samples collected in 2017 and 2018, were send overnight to Golder’s Columbus Ohio XRF laboratory for analysis. The XRF analysis for samples collected in 2019 was performed in the Hurley Operations Golder laboratory. Iron analysis was performed to assist in the data quality assurance review (Section 3). Quality Assurance/Quality Control (QA/QC) samples were prepared in the field laboratory in Hurley or Columbus in accordance with the Work Plan (Golder 2006). Laboratory confirmation samples were collected at a rate of one split XRF sample per 10 (10%) sent to SVL Analytical laboratory (SVL) in Kellogg, Idaho for copper and iron analysis. Dedicated disposable sampling equipment was used for collection of each sample. Table 1

lists results of the XRF analyses for each property, and includes laboratory analytical results for confirmation split samples. Raw XRF data, including calibration blank and soil standard runs, are in Appendix B.

Laboratory data sheets for the analyses performed by SVL Analytical for laboratory confirmation samples are included as Appendix C.

3.0 BORROW MATERIAL QUALITY ASSURANCE

Borrow material to backfill the excavated soil areas within the residential site was acquired from the McCauley Quarry located northwest of the town of Hurley (Figure 1). Samples were collected from base (fill) and gravel stockpiles within the quarry utilized for borrow and compared to United States Environmental Protection Agency (USEPA) Region 6 Human Health Medium-Specific Screening Levels, as described in Section 2.3.2 of the Work Plan (Golder 2006). The medium specific levels used in the comparison were the USEPA Residential Regional Screening Levels (RSLs) for residential soil ingestion. For each borrow site, three sub-samples were collected and composited for laboratory analysis of metals and organic constituents in accordance with the Work Plan (Golder 2006). Inorganic and organic analytical results for the borrow materials are listed in Tables 2 and 3, respectively. Table 3 does not list the individual RSLs, as there were no detections of organics.

Laboratory data sheets for the analyses performed by SVL Analytical and Anatek Labs, Inc. for laboratory borrow soils quality assurance are included as Appendix C.

4.0 DATA QUALITY ASSURANCE

A detailed data validation review of XRF analysis and independent laboratory data analysis was conducted by a Golder chemist during the 2006/2007 remediation activities and is presented in the HSIU IRA Completion Report (Golder 2008). Data validation of the XRF data was completed in 2006/2007 by comparing the XRF data to split sample results from the independent laboratory to site-specific calibration standards (SSCS). The following sections describe the review of data from the use of the XRF instrument in 2017 through 2019 to demonstrate that the data were sufficiently accurate for screening soil at the 5,000 mg/kg copper criterion.

4.1 Quality Control Metrics

The quality control (QC) tests were performed during the course of the 2017 through 2019 sampling and remediation activities with the XRF instrument, and metrics were found to be within limits.

Parameters for QC include precision, accuracy, representativeness, comparability and completeness (PARCC). The QC items for accuracy include a Peak Resolution check using a stainless steel chip to track instrument resolution, and calibration checks from a National Institute of Standards Testing (NIST) standard, and several SSCS. Blank data ensures accuracy when the absence of contamination eliminates the possibility to skew results. Blank data were generated with a standard silicon dioxide matrix, or a polymer (plastic) block to determine fugitive contaminants on the instrument window during testing. Duplicate sample analysis provides precision criteria and was performed as either a field duplicate sample (FD) using a separate aliquot of the same processed soil, or a replicate sample test performed on the same XRF sample cup. Comparability is ensured when the SSCS are chosen to match the site samples by analyte concentration range, and matrix similarity. The SSCS were chosen from similar location soils and are independently analyzed at an external laboratory to determine copper and iron concentrations that fall within the range of site concentrations tested. The SSCS checks were performed for the 2017 and 2018 XRF analyses. The SSCS checks were not completed for the 2019 analyses because the accuracy of the XRF unit used in 2019 was much greater than the units used in previous Hurley

Yards efforts, and did not require SSCS calibration. Completeness is ensured when the sampling program selects the proper number of soil samples at the proper intervals as presented in the Work Plan (Golder 2006).

4.2 Quality Control Responses

4.2.1 Resolution Checks

The stainless steel chip was tested at the beginning of each day's operation of the XRF instrument. If the resolution measured for the signature iron peak was maintained, the peak resolution for other elements is ensured and testing could commence. All resolution requirements were met for each day's testing period.

4.2.2 Calibration Checks

Two different NIST standards were tested at a rate of at least one per every 20 samples, as shown in Appendix B, Table B-2. The relative percent difference (RPD) was calculated from the XRF results compared to their certified NIST results (Appendix B, Table B-3) with an acceptable limit of 35%. The RPDs were all less than 35% for copper. The iron results were outside of the acceptable limit in 79 out of 109 cases (73%).

4.2.3 SSCS Checks

There were seven SSCS samples analyzed during the investigation with copper concentrations ranging between 96 mg/kg and 3,420 mg/kg, and iron concentrations ranging between 12,100 mg/kg and 43,200 mg/kg.

The SSCS samples were analyzed at a rate of at least one per every 20 samples (5%), as shown in Appendix B, Table B-2. The RPD was calculated from the XRF results compared to their corresponding laboratory results for copper and iron (Appendix B, Table B-3) with an acceptable limit of 35%. The RPDs were acceptable for copper in all but four cases out of 109 (96%). For lead, the results were acceptable for all but two results for five of the seven standards, and unacceptable for nearly all results for two of the seven SSCS.

4.2.4 Field Duplicates

There were eleven FDs analyzed throughout the investigation, representing 10% of total site samples (Appendix B, Table B-2). The % difference (%D) was calculated from the FDs compared to their corresponding parent sample concentrations with an acceptable limit of 35%. The %D results were within the acceptable limit in nineteen out of twenty results for copper (95%) and 20 out of 20 results for iron (100%) (Appendix B, Table B-4).

4.2.5 Blank Results

The NIST blank standard (consisting of silicon dioxide) was analyzed 24 times throughout the investigation, at a rate of at least 5% of total site samples (Appendix B, Table B-2). The acceptable standard is for all results to be less than the lowest observed project sample concentration. The blank results were all within that standard (Appendix B, Table B-5).

4.2.6 Laboratory Confirmation Sample Analysis

The parent sample XRF results and their confirmation SVL results are shown in Appendix B, Table B-6. The target split sample collection rate is 5%. There were a total of 22 split samples collected, representing 11% of site sample locations (Appendix B, Table B-2).

In Figure 2, the XRF results for copper are individually graphed against their corresponding SVL results, in accordance with USEPA Method 6200 (USEPA 2007), producing a r^2 value of 0.91, which is well above the acceptance criterion of 0.70.

Figure 2 includes the copper decision criterion for copper, which divides the plot into four quadrants in order to evaluate the occurrence of Type I and II errors, true positive results, and true negative results. These quadrants are defined below:

1) A Type I error, or false positive, occurs when the XRF result incorrectly predicts that the sample result was below the SSSRL (remediation not needed), when in fact the SSSRL was exceeded (remediation needed), as represented by the SVL result. The consequence of this decision is that remediation may not have occurred when it was needed. To be protective of the environment, the magnitude of the Type I error is of most concern, since it leads to not remediating when remediation should occur.

2) A Type II error, or false negative, occurs when the XRF result incorrectly predicts that the sample result was above the SSSRL when in fact it was not, as represented by the SVL result. The consequence of this decision is that areas that did not need remediation may have been remediated.

3) A True Positive result indicates that both the XRF and SVL results for a sample exceeded the SSSRL. The consequence is that the XRF result correctly predicted that remediation was needed and was confirmed by the SVL result.

4) A True Negative result indicates that both the XRF and SVL results for a sample were below the SSSRL. The consequence is that the XRF result correctly predicted that remediation was not needed and was confirmed by the SVL result.

The results for copper showed that all results fall within a true positive or true negative quadrant with the exception of three Type II errors (false negative). The consequence of the false negative is that for these XRF three results, it may have been determined that remediation was needed when in fact it was not.

The accuracy of the XRF results in comparison to the SVL results is evaluated by calculating the RPD of the data pairs, with an acceptance criterion of 35%. As shown in Table B-6, the RPDs of XRF results in relation to their corresponding SVL results for copper and lead are all less than 35%.

4.2.7 Data Quality Assurance Summary

The PARCC parameters for the evaluation of the quality of XRF data were achieved overall for copper. The data from this investigation meet the quality assurance standards for the project objectives.

5.0 RESULTS

Five properties in Hurley that were previously uncharacterized were sampled during November 2017 and June 2018; and one previously sampled property was remediated in August 2019 (Figure 1; Appendix A).

Of the five properties that were not previously sampled, two had no exceedances of the copper RAC and were determined to not require remediation:

- 305 Nevada Avenue
- 102 Pattie Avenue

Three of the properties that has not been previously sampled had exceedances of the copper RAC, but the property owners declined remediation:

- 502 D Street

- 102 Romero Avenue
- 314 Romero Avenue

One property, 2/3 Santa Rita Avenue, was remediated in 2019. Soil exceeding the target copper concentrations of 4,500 mg/kg was excavated and removed to a permitted facility (West Stockpile). Final copper concentrations for the property are shown in the "Final Results" maps included Appendix A. An XRF analyses for all samples met the decision criteria of 4,500 mg/kg copper concentrations.

Laboratory confirmation sample results listed in Table 1 and shown on Figure 2 confirmed that the RAC have been achieved as indicated by XRF analyses.

Restoration of the yards included grading for drainage, backfill with base material, placement of a weed barrier, and placement of gravel for landscape and driveway purposes, at the request of the property owner.

Borrow material used as fill and landscaping materials during yard restoration in 2019 was sampled and analyzed for inorganic and organic constituents in accordance with the Work Plan (Golder 2006). In Table 2 and Table 3, results are listed and screened against EPA Region 6 Human Health Medium-Specific Screening Levels and HSIU maximum reference soils concentrations to the mineralized nature of soil in the Hurley vicinity. The reference concentration for iron was taken from the Background Report (Chino 1995). Borrow material met all criterion. Tables 2 and 3 are structured similar to Tables 5-1 and 5-2 presented in the Completion Report (Golder 2008).

The PARCC parameters for the evaluation of the quality of XRF data were achieved overall for copper. The data from this investigation meet the quality assurance standards for the project objectives.

Under the 2009 HSIU ROD, Chino in a good faith effort made continuous outreaches to property owners to gain access for sampling and remediation on non-Chino properties. Access agreements provide Chino legal authority from property owners to perform and complete remediation activities. Following the 2017 to 2019 outreach program and remediation activities, three properties remain in Hurley that have copper concentrations exceeding the RAC due to Chino only being granted access to sample.

6.0 REFERENCES

Chino Mines Company. (Chino). 1995. AOC Investigation Area Background Report Chino Mine Investigation Area, prepared for Chino Mines Company, October 5.

Golder Associates Inc. (Golder). 2006. *Work Plan for the Hurley Interim Remedial Action at the Hurley Soils Investigation Unit*. Submitted to Chino Mines Company. April 7.

Golder. 2006. *Health and Safety Plan Addendum.* Submitted to Chino Mines Company. April 7.

Golder. 2008. *Completion Report for the Hurley Interim Remedial Action at the Hurley Soils Investigation Unit*. Submitted to Chino Mines Company. April 18.

Golder. 2015. *Hurley Soils Investigation Unit Completion Report Addendum Interim Remedial Action at the Hurley Soils Investigation Unit*. Submitted to Chino Mines Company. April 18.

United States Environmental Protection Agency. (USEPA). 2007. SW-846 Test Method 6200: Field Portable XRF Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment. Rev. 0. February 2007.

Tables

Table 1: Summary of X-Ray Fluorescence Analyzer and Confirmation Sample Data

Property Address	Date	Sample ID	XRF Analyzer Results				Laborabory Confirmation Samples	
			Cu	Cu +/-	Fe	Fe +/-	Cu	Fe
			ppm		ppm		ppm	ppm
502 D St.	7-Nov-17	R1-01-502D	4,807	27	30,208	147	n/a	n/a
	7-Nov-17	R1-02-502D	3,650	23	32,730	163	n/a	n/a
	7-Nov-17	R1-03-502D	812	9	21,128	109	n/a	n/a
	7-Nov-17	R1-04-502D	5,308	31	29,076	150	n/a	n/a
	7-Nov-17	R1-05-502D	6,490	36	45,024	217	n/a	n/a
	7-Nov-17	R1-06-502D	1,113	10	24,876	126	n/a	n/a
	7-Nov-17	R1-07-502D	5,115	30	35,801	180	n/a	n/a
	7-Nov-17	R1-08-502D	3,405	21	28,099	135	n/a	n/a
	7-Nov-17	R1-09-502D	1,315	12	17,864	97	n/a	n/a
	7-Nov-17	R1-10-502D	27,909	139	64,490	323	22,600	38,800
	7-Nov-17	R1-11-502D	2,629	18	34,174	164	n/a	n/a
	7-Nov-17	R1-12-502D	569	8	23,888	123	n/a	n/a
	7-Nov-17	R1-13-502D	12,803	67	68,064	336	n/a	n/a
	7-Nov-17	R1-14-502D	945	9	17,371	86	n/a	n/a
	7-Nov-17	R1-15-502D	1,011	10	20,394	106	n/a	n/a
305 Nevada Ave	8-Nov-17	R1-01-305 Nev	1,221	11	18,236	94	n/a	n/a
	8-Nov-17	R1-02-305 Nev	619	8	39,171	185	n/a	n/a
	8-Nov-17	R1-03-305 Nev	1,180	11	26,471	130	n/a	n/a
	8-Nov-17	R1-04-305 Nev	488	7	23,733	117	n/a	n/a
	8-Nov-17	R1-05-305 Nev	2,013	15	15,457	87	1,800	13,900
	8-Nov-17	R1-06-305 Nev	844	9	23,579	118	n/a	n/a
	8-Nov-17	R1-07-305 Nev	1,202	11	39,709	193	n/a	n/a
	8-Nov-17	R1-08-305 Nev	1,037	11	18,781	104	n/a	n/a
	8-Nov-17	R1-09-305 Nev	774	9	22,882	115	n/a	n/a
	8-Nov-17	R1-10-305 Nev	844	9	31,636	153	n/a	n/a
	8-Nov-17	R1-11-305 Nev	528	7	19,012	97	n/a	n/a
	8-Nov-17	R1-12-305 Nev	1,551	13	30,110	145	n/a	n/a
	8-Nov-17	R1-13-305 Nev	779	9	32,787	158	n/a	n/a
	8-Nov-17	R1-14-305 Nev	304	6	23,181	116	n/a	n/a
	8-Nov-17	R1-15-305 Nev	2,324	16	27,898	135	1,570	19,300
	8-Nov-17	R1-16-305 Nev	788	9	24,788	124	n/a	n/a
	8-Nov-17	R1-17-305 Nev	1,209	11	25,150	121	n/a	n/a
	8-Nov-17	R1-18-305 Nev	1,420	12	37,192	178	n/a	n/a
	8-Nov-17	R1-19-305 Nev	1,474	12	41,156	193	n/a	n/a
	9-Nov-17	R1-20-305 Nev	1,559	13	32,616	162	n/a	n/a
	9-Nov-17	R1-21-305 Nev	190	4	21,032	100	n/a	n/a
	9-Nov-17	R1-22-305 Nev	170	4	18,396	92	n/a	n/a
	9-Nov-17	R1-23-305 Nev	717	8	24,612	121	n/a	n/a
	9-Nov-17	R1-24-305 Nev	1,109	10	36,912	173	n/a	n/a
	9-Nov-17	R1-25-305 Nev	1,175	11	34,388	165	840	22,300
	9-Nov-17	R1-26-305 Nev	798	8	28,999	137	n/a	n/a
	9-Nov-17	R1-27-305 Nev	1,572	13	30,238	145	n/a	n/a
	9-Nov-17	R1-28-305 Nev	861	9	50,289	239	n/a	n/a
	9-Nov-17	R1-30-305 Nev	418	6	22,861	115	n/a	n/a
	9-Nov-17	R1-31-305 Nev	1,943	15	26,132	129	n/a	n/a
	9-Nov-17	R1-33-305 Nev	995	10	30,693	145	n/a	n/a
	9-Nov-17	R1-34-305 Nev	649	7	29,927	140	n/a	n/a
	9-Nov-17	R1-36-305 Nev	518	7	22,244	112	n/a	n/a
	9-Nov-17	R1-37-305 Nev	811	9	18,823	100	n/a	n/a
	9-Nov-17	R1-38-305 Nev	1,024	10	31,567	153	800	23,200
	9-Nov-17	R1-39-305 Nev	754	8	30,687	146	n/a	n/a
	10-Nov-17	R1-40-305 Nev	644	7	28,571	133	n/a	n/a
	10-Nov-17	R1-42-305 Nev	466	7	20,049	104	n/a	n/a
	10-Nov-17	R1-43-305 Nev	880	9	21,237	109	n/a	n/a
	10-Nov-17	R1-44-305 Nev	1,091	10	30,317	144	n/a	n/a
	10-Nov-17	R1-45-305 Nev	600	7	24,609	117	n/a	n/a
	10-Nov-17	R1-46-305 Nev	932	9	25,164	121	n/a	n/a
	10-Nov-17	R1-47-305 Nev	825	8	26,184	120	n/a	n/a
	10-Nov-17	R1-48-305 Nev	927	9	28,928	136	n/a	n/a
	10-Nov-17	R1-49-305 Nev	962	9	23,957	116	880	17,700
	10-Nov-17	R1-50-305 Nev	903	9	27,799	131	n/a	n/a
	10-Nov-17	R1-51-305 Nev	1,014	9	27,854	130	n/a	n/a
	10-Nov-17	R1-52-305 Nev	996	9	29,634	137	n/a	n/a
	10-Nov-17	R1-53-305 Nev	1,141	10	26,301	126	n/a	n/a
	10-Nov-17	R1-54-305 Nev	164	4	23,237	111	n/a	n/a
	10-Nov-17	R1-55-305 Nev	358	6	21,103	106	n/a	n/a
	10-Nov-17	R1-56-305 Nev	1,285	11	19,585	101	n/a	n/a

Table 1: Summary of X-Ray Fluorescence Analyzer and Confirmation Sample Data

Property Address	Date	Sample ID	XRF Analyzer Results				Laborabory Confirmation Samples	
			Cu	Cu +/-	Fe	Fe +/-	Cu	Fe
			ppm		ppm		ppm	ppm
102 Pattie Ave	10-Nov-17	R1-01-102 Pat	1,017	10	26,167	127	n/a	n/a
	10-Nov-17	R1-02-102 Pat	1,571	12	26,668	128	n/a	n/a
	10-Nov-17	R1-03-102 Pat	1,101	10	23,949	118	n/a	n/a
	10-Nov-17	R1-04-102 Pat	1,027	9	19,265	90	884	15,500
	10-Nov-17	R1-05-102 Pat	1,251	11	29,593	139	n/a	n/a
	10-Nov-17	R1-06-102 Pat	1,049	10	33,141	158	n/a	n/a
	10-Nov-17	R1-07-102 Pat	1,317	11	37,007	176	n/a	n/a
	10-Nov-17	R1-08-102 Pat	1,328	11	26,809	125	n/a	n/a
	10-Nov-17	R1-09-102 Pat	1,460	11	23,781	114	n/a	n/a
	10-Nov-17	R1-10-102 Pat	1,041	10	26,751	129	n/a	n/a
	10-Nov-17	R1-11-102 Pat	1,057	10	32,453	150	n/a	n/a
	10-Nov-17	R1-12-102 Pat	1,826	14	28,636	137	n/a	n/a
	13-Nov-17	R1-13-102 Pat	2,003	14	21,130	102	n/a	n/a
	13-Nov-17	R1-14-102 Pat	1,143	11	32,954	159	672	22,800
	13-Nov-17	R1-15-102 Pat	1,199	11	30,754	146	n/a	n/a
	13-Nov-17	R1-16-102 Pat	2,193	15	25,146	121	n/a	n/a
	13-Nov-17	R1-17-102 Pat	2,525	17	31,655	154	n/a	n/a
	13-Nov-17	R1-18-102 Pat	2,800	18	29,491	139	n/a	n/a
	13-Nov-17	R1-19-102 Pat	1,963	13	18,307	90	n/a	n/a
	13-Nov-17	R1-20-102 Pat	1,669	13	28,951	135	n/a	n/a
	13-Nov-17	R1-21-102 Pat	1,158	11	29,017	142	n/a	n/a
	13-Nov-17	R1-22-102 Pat	1,370	12	25,266	127	n/a	n/a
	13-Nov-17	R1-23-102 Pat	1,546	13	26,457	131	n/a	n/a
	13-Nov-17	R1-24-102 Pat	1,035	10	26,854	128	957	20,500
	13-Nov-17	R1-25-102 Pat	1,768	13	32,945	154	n/a	n/a
	13-Nov-17	R1-26-102 Pat	1,646	13	17,812	91	n/a	n/a
	13-Nov-17	R1-27-102 Pat	1,852	13	19,282	95	n/a	n/a
	13-Nov-17	R1-28-102 Pat	1,871	14	28,612	141	n/a	n/a
	13-Nov-17	R1-29-102 Pat	1,711	13	26,513	130	1,690	19,800
102 Romero Ave	27-Jun-18	R1-01-102Rom	1,484	11	26,063	117	n/a	n/a
	27-Jun-18	R1-02-102Rom	3,478	21	58,619	265	1,820	32,500
	27-Jun-18	R1-03-102Rom	1,737	13	38,260	174	n/a	n/a
	27-Jun-18	R1-04-102Rom	6,536	34	36,949	172	n/a	n/a
	27-Jun-18	R1-05-102Rom	4,760	25	32,659	147	n/a	n/a
	27-Jun-18	R1-06-102Rom	1,512	12	30,947	143	n/a	n/a
	27-Jun-18	R1-07-102Rom	8,144	42	52,569	239	4,320	32,600
	27-Jun-18	R1-08-102Rom	1,859	25	26,833	242	n/a	n/a
	27-Jun-18	R1-09-102Rom	6,325	33	30,695	144	n/a	n/a
	27-Jun-18	R1-11-102Rom	4,657	28	33,646	167	n/a	n/a
	27-Jun-18	R1-12-102Rom	7,825	42	51,303	242	n/a	n/a
	27-Jun-18	R1-13-102Rom	3,308	20	35,882	164	n/a	n/a
	27-Jun-18	R1-15-102Rom	1,855	14	22,663	114	n/a	n/a
	27-Jun-18	R1-16-102Rom	9,379	48	62,242	290	n/a	n/a
	27-Jun-18	R1-17-102Rom	2,751	17	29,271	137	n/a	n/a
	27-Jun-18	R1-18-102Rom	4,739	26	29,042	137	2,940	20,100
	27-Jun-18	R1-19-102Rom	5,358	31	38,609	187	n/a	n/a
	27-Jun-18	R1-20-102Rom	1,752	14	24,721	122	n/a	n/a
	27-Jun-18	R1-21-102Rom	235	5	32,551	153	n/a	n/a
	28-Jun-18	R1-22-102ROM	2,358	16	35,235	161	n/a	n/a
	28-Jun-18	R1-23-102ROM	1,063	9	19,080	91	n/a	n/a
	28-Jun-18	R1-24-102ROM	4,234	27	32,610	167	n/a	n/a
	28-Jun-18	R1-25-102ROM	1,755	13	28,327	130	n/a	n/a
	28-Jun-18	R1-26-102ROM	1,673	13	23,702	114	n/a	n/a
	28-Jun-18	R1-27-102ROM	1,061	10	14,835	76	n/a	n/a
	28-Jun-18	R1-28-102ROM	1,131	11	36,101	174	n/a	n/a
314 Romero Ave	28-Jun-18	R1-01-314ROM	2,014	16	40,740	206	n/a	n/a
	28-Jun-18	R1-02-314ROM	2,940	20	31,534	159	n/a	n/a
	28-Jun-18	R1-03-314ROM	1,960	15	36,863	183	n/a	n/a
	28-Jun-18	R1-04-314ROM	1,795	14	33,618	158	1,190	22,500
	28-Jun-18	R1-05-314ROM	5,154	29	30,706	146	n/a	n/a
	28-Jun-18	R1-06-314ROM	3,865	23	50,921	228	n/a	n/a
	28-Jun-18	R1-07-314ROM	4,219	28	49,969	253	n/a	n/a
	28-Jun-18	R1-08-314ROM	5,446	30	43,068	199	5,940	34,900
	28-Jun-18	R1-09-314ROM	3,435	21	32,209	154	n/a	n/a
	28-Jun-18	R1-11-314ROM	4,752	27	36,410	172	n/a	n/a
	28-Jun-18	R1-12-314ROM	414	7	43,624	210	n/a	n/a
	28-Jun-18	R1-13-314ROM	4,009	24	32,574	155	n/a	n/a
	28-Jun-18	R1-14-314ROM	2,229	18	30,319	162	n/a	n/a
	28-Jun-18	R1-15-314ROM	4,516	27	46,880	223	n/a	n/a
	28-Jun-18	R1-16-314ROM	1,820	14	38,741	178	n/a	n/a
	28-Jun-18	R1-17-314ROM	3,547	21	32,494	148	n/a	n/a
	28-Jun-18	R1-18-314ROM	1,070	9	18,741	90	n/a	n/a
	28-Jun-18	R1-19-314ROM	5,962	32	46,088	212	n/a	n/a
	28-Jun-18	R1-20-314ROM	4,538	25	39,627	177	n/a	n/a

Table 1: Summary of X-Ray Fluorescence Analyzer and Confirmation Sample Data

Property Address	Date	Sample ID	XRF Analyzer Results				Laborabory Confirmation Samples	
			Cu	Cu +/-	Fe	Fe +/-	Cu	Fe
			ppm		ppm		ppm	ppm
314 Romero Ave	28-Jun-18	R1-21-314ROM	4,916	27	24,292	119	n/a	n/a
	28-Jun-18	R1-22-314ROM	2,666	17	12,447	66	n/a	n/a
	28-Jun-18	R1-23-314ROM	881	9	26,716	130	n/a	n/a
	28-Jun-18	R1-24-314ROM	187	4	13,525	72	n/a	n/a
	28-Jun-18	R1-25-314ROM	2,076	16	18,673	103	n/a	n/a
2 Santa Rita Ave (Cont)	2-Aug-19	7270 R2	3,945	28	28,579	146	3,680	19,800
	2-Aug-19	7270 R2 Dupe	3,965	28	28,667	145	n/a	n/a
	2-Aug-19	7272 R2	185	3	25,312	75	n/a	n/a
	2-Aug-19	7280 R2	9,426	29	33,152	91	n/a	n/a
	2-Aug-19	7282 R2	2,418	11	13,872	46	n/a	n/a
	2-Aug-19	7281 R2	5,519	21	27,153	83	n/a	n/a
	2-Aug-19	7279 R2	5,949	38	35,779	180	n/a	n/a
	2-Aug-19	7274 R2	4,946	33	26,074	139	n/a	n/a
	2-Aug-19	7274 R2 Dupe	4,882	33	25,616	135	n/a	n/a
	2-Aug-19	7280 R3	3,184	25	29,971	155	n/a	n/a
	2-Aug-19	7279 R3	1,907	17	23,622	123	1,950	17,600
	2-Aug-19	7274 R3	2,788	23	27,953	146	n/a	n/a
	2-Aug-19	7271 R2	2,522	23	37,524	198	n/a	n/a
	2-Aug-19	7275 R2	11,610	61	31,408	158	n/a	n/a
	2-Aug-19	7278 R2	4,130	31	22,575	131	n/a	n/a
	2-Aug-19	7275 R3	2,977	25	29,176	161	n/a	n/a
	2-Aug-19	7275 R3 Dupe	2,920	23	28,073	142	n/a	n/a
	2-Aug-19	7276 R2	8,722	49	35,507	171	n/a	n/a
	2-Aug-19	7277 R2	4,837	28	19,215	96	9,500	27,000
	5-Aug-19	7276 R3	4,752	43	73,771	428	n/a	n/a
	5-Aug-19	7276 R3 Dupe	4,953	38	89,379	430	n/a	n/a
	5-Aug-19	7276 R4	1,950	17	32,181	148	n/a	n/a
	5-Aug-19	7276 R4 Dupe	2,002	17	31,567	147	n/a	n/a
	5-Aug-19	7277 R3	4,005	26	29,880	140	n/a	n/a
	5-Aug-19	7281 R3	5,612	33	25,034	123	5,900	23,000
	5-Aug-19	7281 R4	8,948	51	25,177	135	n/a	n/a
	5-Aug-19	7281 R5	2,811	21	23,450	117	n/a	n/a
3 Santa Rita Ave	1-Aug-19	7308 R2	7,261	24	31,098	87	n/a	n/a
	1-Aug-19	7308 R3	1,121	14	22,814	130	n/a	n/a
	1-Aug-19	7302 R2	2,833	22	26,306	132	n/a	n/a
	1-Aug-19	7303 R2	6,096	25	29,409	104	n/a	n/a
	1-Aug-19	7303 R3	5,130	20	26,616	81	n/a	n/a
	1-Aug-19	7301 R2	2,085	10	28,105	80	n/a	n/a
	1-Aug-19	7303 R4	391	4	19,424	62	n/a	n/a
	2-Aug-19	7299 R2	8,979	52	32,667	170	8,510	25,000
	2-Aug-19	7304 R2	4,990	20	41,375	119	n/a	n/a
	2-Aug-19	7304 R3	4,019	16	30,936	87	n/a	n/a
	2-Aug-19	7307 R2	419	6	73,082	248	n/a	n/a
	2-Aug-19	7309 R2	5,056	18	30,255	82	n/a	n/a
	43679	7310 R2	4,884	18	30,259	83	n/a	n/a
	2-Aug-19	7309 R2	312	3	15,236	45	n/a	n/a
	2-Aug-19	7310 R3	575	5	27,027	78	n/a	n/a
	2-Aug-19	7311 R2	4,610	17	24,997	73	4,350	17,900
	2-Aug-19	7311 R2 Dupe	4,419	19	23,448	78	n/a	n/a
	2-Aug-19	7311 R3	5,252	20	17,685	62	n/a	n/a
	2-Aug-19	7311 R4	2,209	12	19,227	64	n/a	n/a
	2-Aug-19	7299 R3	7,078	45	31,730	169	n/a	n/a
	2-Aug-19	7299 R4	1,226	16	25,635	156	n/a	n/a
	5-Aug-19	7305 R2	2,921	22	28,461	138	n/a	n/a
	5-Aug-19	7305 R2 Dupe	2,918	22	28,562	135	n/a	n/a
	5-Aug-19	7306 R2	5,587	32	25,374	119	n/a	n/a
	5-Aug-19	7312 R2	3,478	23	16,717	88	n/a	n/a
	5-Aug-19	7306 R3	1,451	14	25,756	124	1,220	17,200
	5-Aug-19	7306 R3 Dupe	1,474	15	25,405	127	n/a	n/a

Table 2: Borrow Site Soil Inorganic Constituents Results Comparison

Parameter	Units	Sample Collection Date	EPA Regional Screening Level[1] (mg/kg)	Background[2]	SW Pea Gravel	Base Course McCauley	McCauley Red Rock	McCauley Gray Rock	SW Native Soil	RSL Limit exceeded?	Reference Concentration exceeded?
% Solids	%	7/12/2019	NA	NA	99.4	99.4	99.9	99.6	97.4	NA	NA
Copper[1a]	mg/kg	7/12/2019	3,100	NA	9.49	7.97	58.2	5.55	130	NO	NO
Iron[1a]	mg/kg	7/12/2019	55,000	47,300	12,100	10,200	32,100	4,590	23,700	NO	NO
Lead[1b]	mg/kg	7/12/2019	82	NA	3.4	9.6	51.4	5.3	64.3	NO	NO

Note:

NA: Not applicable

mg/kg: milligrams per kilogram

%: percent

[1] EPA Regional Screening Levels (RSL) for Residential Soil, Target Hazard Quotient 1.0 (November 2019)

[1a] EPA RSL, Noncancer Child Hazard Index, Ingestion Screening Level

[1b] EPA RSL, Carcinogenic Target Risk, Ingestion Screening Level

[2] The reference concentration for iron was taken from the Background Report (Chino 1995).

Table 3: Borrow Site Soil Organic Constituents Results Comparison

Parameter	Units	Sample Collection Date	Base Course McCauley	McCauley Red Rock	McCauley Gray Rock
1,1,1,2-tetrachloroethane	mg/kg	7/12/2019	ND	ND	ND
1,1,1-trichloroethane	mg/kg	7/12/2019	ND	ND	ND
1,1,2,2-tetrachloroethane	mg/kg	7/12/2019	ND	ND	ND
1,1,2-trichloroethane	mg/kg	7/12/2019	ND	ND	ND
1,1-dichloroethane	mg/kg	7/12/2019	ND	ND	ND
1,1-dichloroethene	mg/kg	7/12/2019	ND	ND	ND
1,1-Dichloropropylene	mg/kg	7/12/2019	ND	ND	ND
1,2,3-Trichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,2,3-trichloropropane	mg/kg	7/12/2019	ND	ND	ND
1,2,4-Trichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,2,4-Trichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,2,4-Trimethylbenzene	mg/kg	7/12/2019	ND	ND	ND
1,2-dibromo-3chloropropane	mg/kg	7/12/2019	ND	ND	ND
1,2-dibromoethane	mg/kg	7/12/2019	ND	ND	ND
1,2-dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,2-Dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,2-dichloroethane	mg/kg	7/12/2019	ND	ND	ND
1,2-dichloropropane	mg/kg	7/12/2019	ND	ND	ND
1,2-Diphenylhydrazine	mg/kg	7/12/2019	ND	ND	ND
1,3,5-Trimethylbenzene	mg/kg	7/12/2019	ND	ND	ND
1,3-dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,3-Dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,3-dichloropropane	mg/kg	7/12/2019	ND	ND	ND
1,4-dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1,4-Dichlorobenzene	mg/kg	7/12/2019	ND	ND	ND
1-Methylnaphthalene	mg/kg	7/12/2019	ND	ND	ND
2,2-dichloropropane	mg/kg	7/12/2019	ND	ND	ND
2,3,4,6-Tetrachlorophenol	mg/kg	7/12/2019	ND	ND	ND
2,3,5,6-Tetrachlorophenol	mg/kg	7/12/2019	ND	ND	ND
2,4,5-Trichlorophenol	mg/kg	7/12/2019	ND	ND	ND
2,4,6-Trichlorophenol	mg/kg	7/12/2019	ND	ND	ND
2,4-Dichlorophenol	mg/kg	7/12/2019	ND	ND	ND
2,4-Dimethylphenol	mg/kg	7/12/2019	ND	ND	ND
2,4-Dinitrophenol	mg/kg	7/12/2019	ND	ND	ND
2,4-Dinitrotoluene	mg/kg	7/12/2019	ND	ND	ND
2,6-Dinitrotoluene	mg/kg	7/12/2019	ND	ND	ND
2-Chloronaphthalene	mg/kg	7/12/2019	ND	ND	ND
2-Chlorophenol	mg/kg	7/12/2019	ND	ND	ND
2-Chlorotoluene	mg/kg	7/12/2019	ND	ND	ND
2-Hexanone	mg/kg	7/12/2019	ND	ND	ND
2-Methylnaphthalene	mg/kg	7/12/2019	ND	ND	ND
2-Methylphenol	mg/kg	7/12/2019	ND	ND	ND
2-Nitroaniline	mg/kg	7/12/2019	ND	ND	ND
2-Nitrophenol	mg/kg	7/12/2019	ND	ND	ND
2-Nitropropane	mg/kg	7/12/2019	ND	ND	ND
3+4-Methylphenol	mg/kg	7/12/2019	ND	ND	ND
3-Nitroaniline	mg/kg	7/12/2019	ND	ND	ND
4,4-DDD	mg/kg	7/12/2019	ND	ND	ND
4,4-DDE	mg/kg	7/12/2019	ND	ND	ND
4,4-DDT	mg/kg	7/12/2019	ND	ND	ND
4,6-Dinitro-2-methylphenol	mg/kg	7/12/2019	ND	ND	ND
4-Bromophenyl phenyl ether	mg/kg	7/12/2019	ND	ND	ND
4-Chloro-3-methylphenol	mg/kg	7/12/2019	ND	ND	ND
4-Chloroaniline	mg/kg	7/12/2019	ND	ND	ND
4-Chlorophenyl phenyl ether	mg/kg	7/12/2019	ND	ND	ND
4-Chlorotoluene	mg/kg	7/12/2019	ND	ND	ND
4-Nitroaniline	mg/kg	7/12/2019	ND	ND	ND
4-Nitrophenol	mg/kg	7/12/2019	ND	ND	ND
Acenaphthene	mg/kg	7/12/2019	ND	ND	ND

Table 3: Borrow Site Soil Organic Constituents Results Comparison

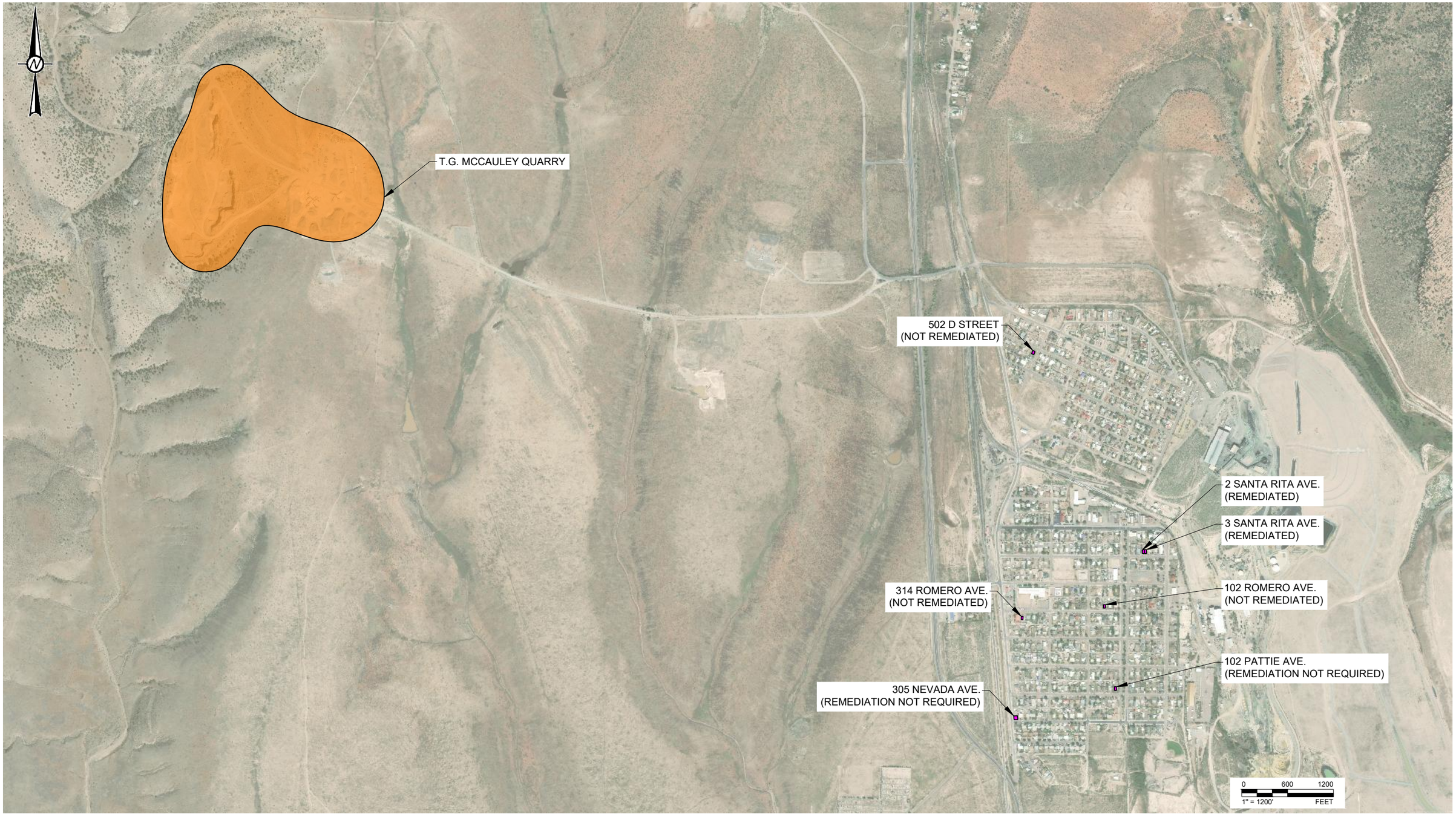
Parameter	Units	Sample Collection Date	Base Course McCauley	McCauley Red Rock	McCauley Gray Rock
Acenaphthylene	mg/kg	7/12/2019	ND	ND	ND
Acetone	mg/kg	7/12/2019	ND	ND	ND
acrylonitrile	mg/kg	7/12/2019	ND	ND	ND
Aldrin	mg/kg	7/12/2019	ND	ND	ND
alpha-BHC	mg/kg	7/12/2019	ND	ND	ND
Aniline	mg/kg	7/12/2019	ND	ND	ND
Anthracene	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1016	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1221	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1232	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1242	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1248	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1254	mg/kg	7/12/2019	ND	ND	ND
Arochlor 1260	mg/kg	7/12/2019	ND	ND	ND
benzene	mg/kg	7/12/2019	ND	ND	ND
Benzidine	mg/kg	7/12/2019	ND	ND	ND
Benzo(a)anthracene	mg/kg	7/12/2019	ND	ND	ND
Benzo(a)pyrene	mg/kg	7/12/2019	ND	ND	ND
Benzo(b)fluoranthene	mg/kg	7/12/2019	ND	ND	ND
Benzo(ghi)perylene	mg/kg	7/12/2019	ND	ND	ND
Benzo(k)fluoranthene	mg/kg	7/12/2019	ND	ND	ND
Benzyl alcohol	mg/kg	7/12/2019	ND	ND	ND
beta-BHC	mg/kg	7/12/2019	ND	ND	ND
Bis(2-chlorethoxy)methane	mg/kg	7/12/2019	ND	ND	ND
Bis(2-chloroethyl)ether	mg/kg	7/12/2019	ND	ND	ND
Bis(2-chloroisopropyl)ether	mg/kg	7/12/2019	ND	ND	ND
Bis(2-ethylhexyl)phthalate	mg/kg	7/12/2019	ND	ND	ND
bromobenzene	mg/kg	7/12/2019	ND	ND	ND
bromochloromethane	mg/kg	7/12/2019	ND	ND	ND
bromodichloromethane	mg/kg	7/12/2019	ND	ND	ND
bromoform	mg/kg	7/12/2019	ND	ND	ND
bromomethane	mg/kg	7/12/2019	ND	ND	ND
Butylbenzylphthalate	mg/kg	7/12/2019	ND	ND	ND
carbon disulfide	mg/kg	7/12/2019	ND	ND	ND
carbon tetrachloride	mg/kg	7/12/2019	ND	ND	ND
Carbozole	mg/kg	7/12/2019	ND	ND	ND
Chlordane	mg/kg	7/12/2019	ND	ND	ND
chlorobenzene	mg/kg	7/12/2019	ND	ND	ND
chloroethane	mg/kg	7/12/2019	ND	ND	ND
chloroform	mg/kg	7/12/2019	ND	ND	ND
chloromethane	mg/kg	7/12/2019	ND	ND	ND
Chrysene	mg/kg	7/12/2019	ND	ND	ND
cis-1,2-dichloroethene	mg/kg	7/12/2019	ND	ND	ND
cis-1,3-dichloropropene	mg/kg	7/12/2019	ND	ND	ND
delta-BHC	mg/kg	7/12/2019	ND	ND	ND
Dibenz(ah)anthracene	mg/kg	7/12/2019	ND	ND	ND
Dibenzofuran	mg/kg	7/12/2019	ND	ND	ND
dibromochloromethane	mg/kg	7/12/2019	ND	ND	ND
dibromomethane	mg/kg	7/12/2019	ND	ND	ND
dichlorodifluoromethane	mg/kg	7/12/2019	ND	ND	ND
Dieldrin	mg/kg	7/12/2019	ND	ND	ND
Diesel	mg/kg	7/12/2019	ND	ND	ND
Diethyl phthalate	mg/kg	7/12/2019	ND	ND	ND
Dimethyl phthalate	mg/kg	7/12/2019	ND	ND	ND
Di-n-butyl phthalate	mg/kg	7/12/2019	ND	ND	ND
Di-n-octyl phthalate	mg/kg	7/12/2019	ND	ND	ND
Endosulfan I	mg/kg	7/12/2019	ND	ND	ND
Endosulfan II	mg/kg	7/12/2019	ND	ND	ND
Endosulfan Sulfate	mg/kg	7/12/2019	ND	ND	ND

Table 3: Borrow Site Soil Organic Constituents Results Comparison

Parameter	Units	Sample Collection Date	Base Course McCauley	McCauley Red Rock	McCauley Gray Rock
Endrin	mg/kg	7/12/2019	ND	ND	ND
Endrin Aldehyde	mg/kg	7/12/2019	ND	ND	ND
Endrin Ketone	mg/kg	7/12/2019	ND	ND	ND
ethylbenzene	mg/kg	7/12/2019	ND	ND	ND
Fluoranthene	mg/kg	7/12/2019	ND	ND	ND
Fluorene	mg/kg	7/12/2019	ND	ND	ND
gamma-BHC (Lindane)	mg/kg	7/12/2019	ND	ND	ND
Heptachlor	mg/kg	7/12/2019	ND	ND	ND
Heptachlor Epoxide	mg/kg	7/12/2019	ND	ND	ND
Hexachlorobenzene	mg/kg	7/12/2019	ND	ND	ND
hexachlorobutadiene	mg/kg	7/12/2019	ND	ND	ND
Hexachlorobutadiene	mg/kg	7/12/2019	ND	ND	ND
Hexachlorocyclopentadiene	mg/kg	7/12/2019	ND	ND	ND
Hexachloroethane	mg/kg	7/12/2019	ND	ND	ND
Indeno(123,cd)pyrene	mg/kg	7/12/2019	ND	ND	ND
Isophorone	mg/kg	7/12/2019	ND	ND	ND
Isopropylbenzene	mg/kg	7/12/2019	ND	ND	ND
m+p-xylene	mg/kg	7/12/2019	ND	ND	ND
Methoxychlor	mg/kg	7/12/2019	ND	ND	ND
Methylene chloride	mg/kg	7/12/2019	ND	ND	ND
Methyl ethyl ketone	mg/kg	7/12/2019	ND	ND	ND
Methyl isobutyl ketone	mg/kg	7/12/2019	ND	ND	ND
MTBE	mg/kg	7/12/2019	ND	ND	ND
naphthalene	mg/kg	7/12/2019	ND	ND	ND
Naphthalene	mg/kg	7/12/2019	ND	ND	ND
n-Butylbenzene	mg/kg	7/12/2019	ND	ND	ND
Nitrobenzene	mg/kg	7/12/2019	ND	ND	ND
Nitrosodimethylamine	mg/kg	7/12/2019	ND	ND	ND
N-nitrosodibutylamine	mg/kg	7/12/2019	ND	ND	ND
N-nitrosodimethylamine	mg/kg	7/12/2019	ND	ND	ND
n-Propylbenzene	mg/kg	7/12/2019	ND	ND	ND
o-xylene	mg/kg	7/12/2019	ND	ND	ND
PCB 8082 (total)	mg/kg	7/12/2019	ND	ND	ND
Pentachlorophenol	mg/kg	7/12/2019	ND	ND	ND
Phenanthrene	mg/kg	7/12/2019	ND	ND	ND
Phenol	mg/kg	7/12/2019	ND	ND	ND
p-Isopropyltoluene	mg/kg	7/12/2019	ND	ND	ND
Pyrene	mg/kg	7/12/2019	ND	ND	ND
Pyridine	mg/kg	7/12/2019	ND	ND	ND
sec-Butylbenzene	mg/kg	7/12/2019	ND	ND	ND
styrene	mg/kg	7/12/2019	ND	ND	ND
tert-Butylbenzene	mg/kg	7/12/2019	ND	ND	ND
tetrachloroethene	mg/kg	7/12/2019	ND	ND	ND
toluene	mg/kg	7/12/2019	ND	ND	ND
Toxaphene	mg/kg	7/12/2019	ND	ND	ND
trans-1,2-dichloroethene	mg/kg	7/12/2019	ND	ND	ND
trans-1,3-dichloropropene	mg/kg	7/12/2019	ND	ND	ND
trichloroethene	mg/kg	7/12/2019	ND	ND	ND
Trichloroflouromethane	mg/kg	7/12/2019	ND	ND	ND
vinyl chloride	mg/kg	7/12/2019	ND	ND	ND
Lube Oil	mg/kg	7/12/2019	ND	ND	ND

Note:
ND: Not detected

Figures



LEGEND

- YARDS EVALUATED FROM 2017-2019
- BORROW AREA - QUARRY

CLIENT
FREEPORT MCMORAN CHINO MINES COMPANY
GRANT COUNTY, NEW MEXICO

CONSULTANT
GOLDER

YYYY-MM-DD	2020-02-14
DESIGNED	BB
PREPARED	REDMOND
REVIEWED	JP
APPROVED	JP

PROJECT
HURLEY SOILS INVESTIGATION

TITLE
2017, 2018, AND 2019 REMEDIATED PROPERTIES AND BORROW AREA

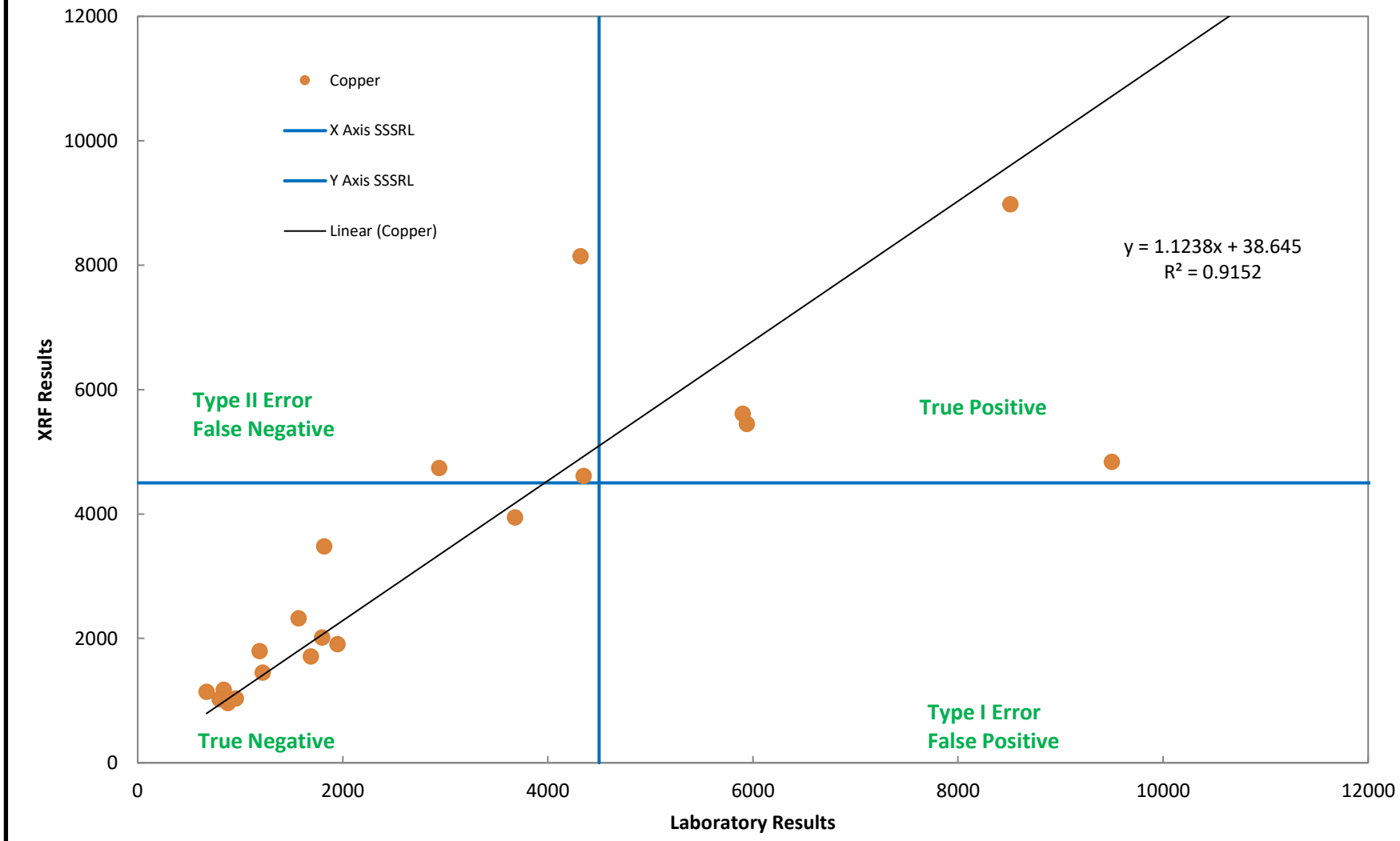
PROJECT NO.	PHASE	REV.	FIGURE
1788061	201	A	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in

0

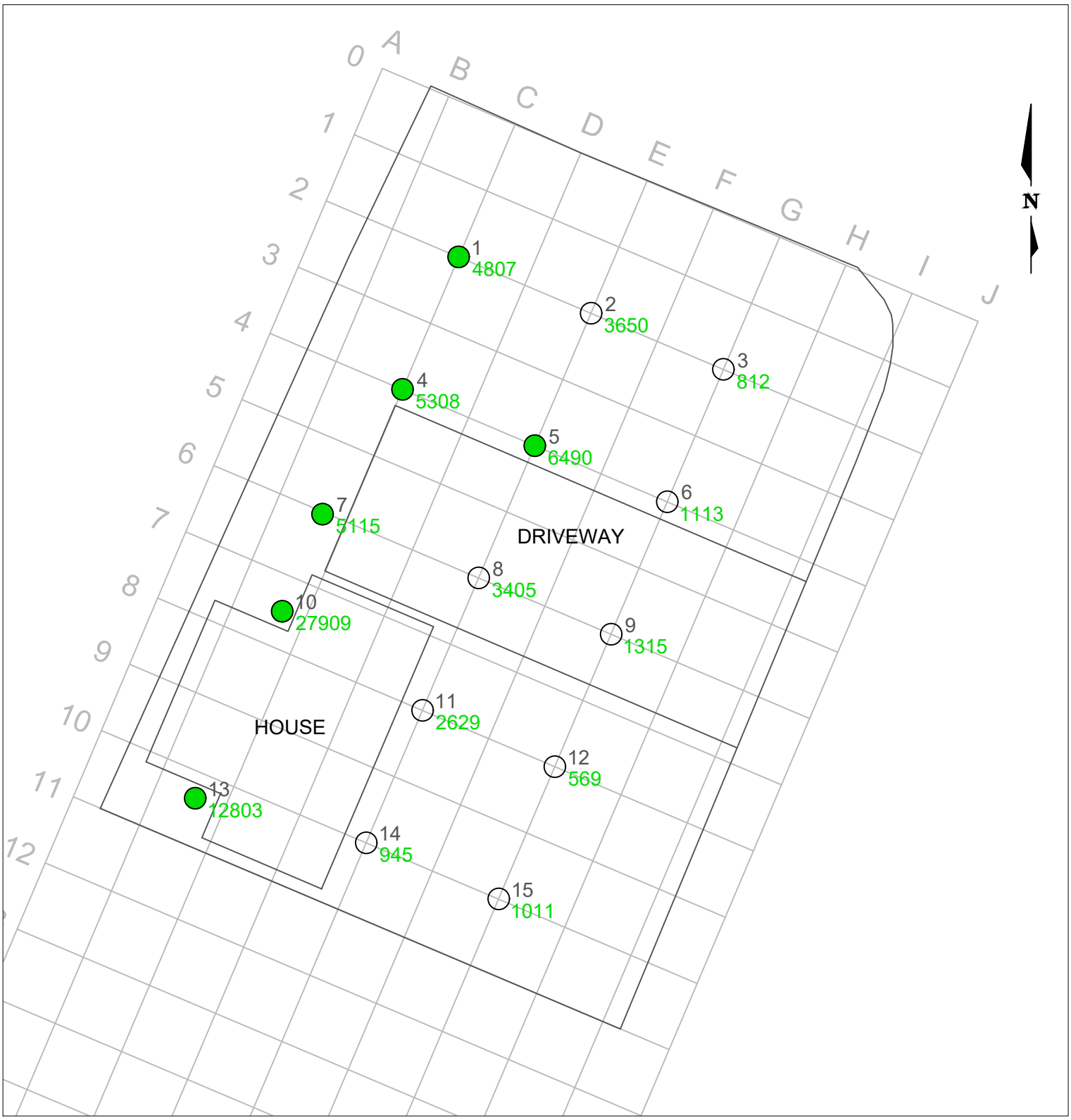
Path: \\redmond.golder.gds\data\geomatics\Freeport\Hurley, NM\99_PROJECTS\1788061 Hurley Yards\201_Report\02_PRODUCTION\DWG | File Name: 1788061_201_001.dwg | Last Edited By: trybar Date: 2020-02-14 Time:2-56:15 PM | Printed By: TRybar Date: 2020-02-18 Time:2:09:12 PM

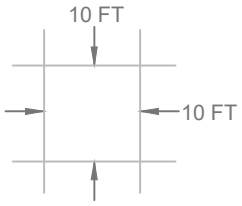


CRAWFORD ENVIRONMENTAL LLC	Title: Comparison of XRF and Laboratory Split Results for Copper		Drawn: DGC
			Checked:
	Project Name: Hurley Yards	Project No.: 1788061	Reviewed:
	Client Name: FreeportMcMoRan/ChinoMines	Date: February 19, 2020	FIGURE 2

APPENDIX A

Hurley Property Maps





LEGEND:

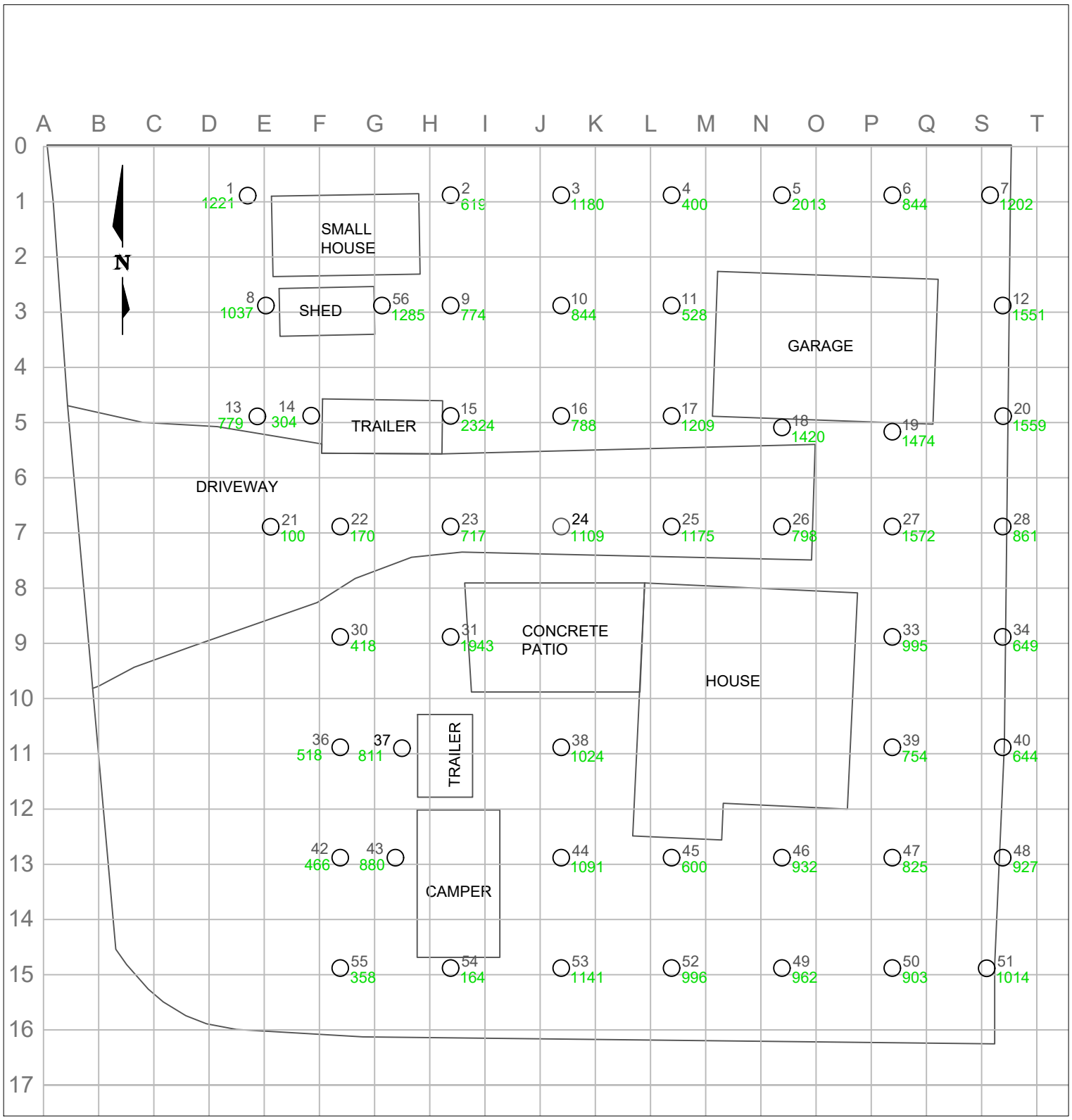
REQUIRES CLEANUP	DOES NOT REQUIRE CLEANUP
Sample Location Number	Sample Location Number
Post Mitigation Copper Results	XRF Copper Results
Tree/Bush	

• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

502 D STREET - ROUND 1 RESULTS

Hurley Remedial Action

Golder Associates



10 FT

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LEGEND:

REQUIRES CLEANUP

Sample Location Number

Post Mitigation Copper Results

Tree/Bush

DOES NOT REQUIRE CLEANUP

Sample Location Number

XRF Copper Results

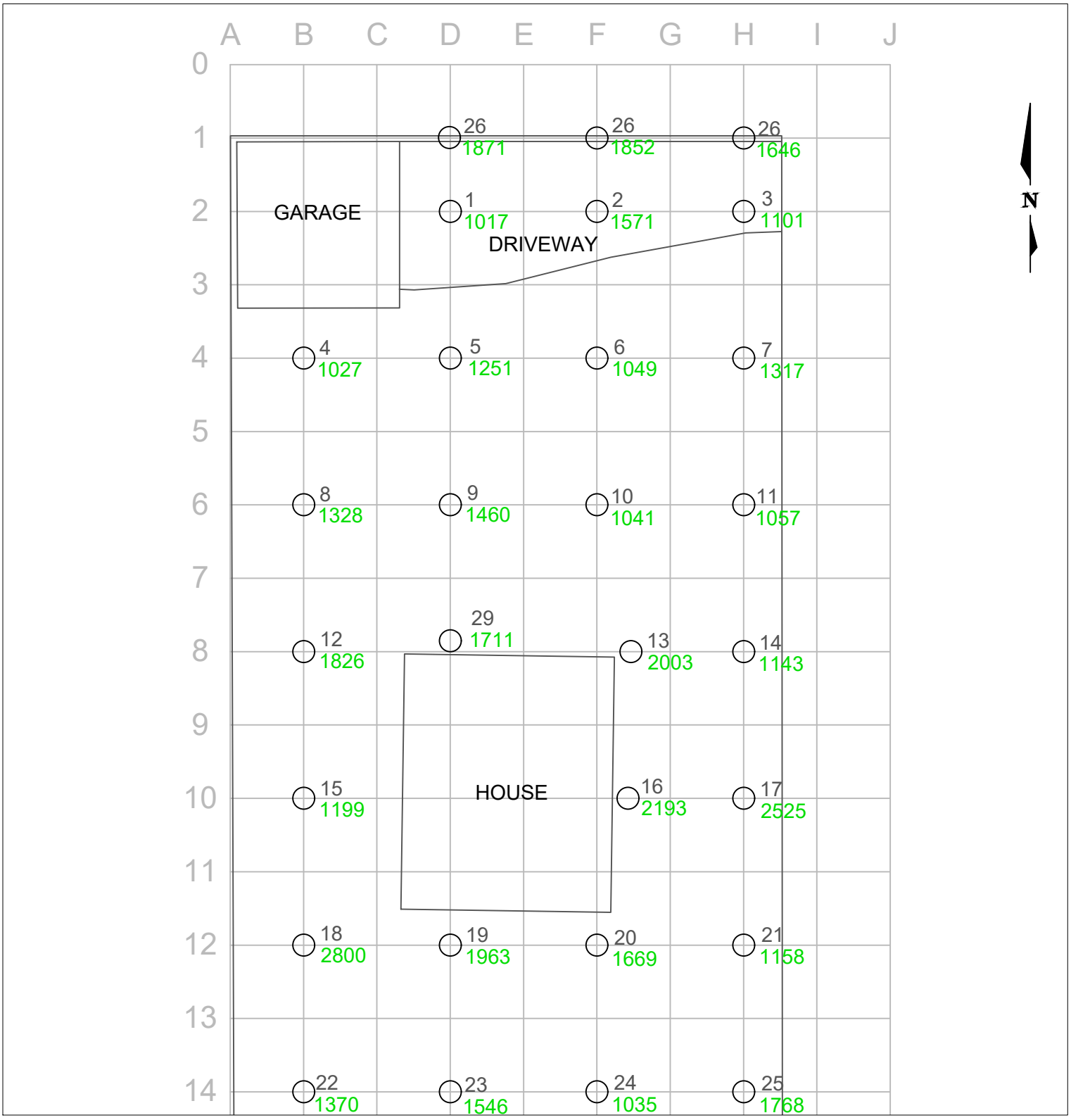
• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department

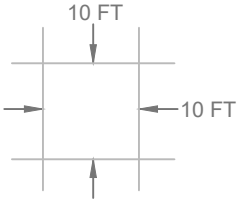
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

305 NEVADA - ROUND 1 RESULTS

Hurley Remedial Action

Golder Associates





LEGEND:

REQUIRES CLEANUP

Sample Location Number
Post Mitigation Copper Results
Tree/Bush

DOES NOT REQUIRE CLEANUP

Sample Location Number
XRF Copper Results

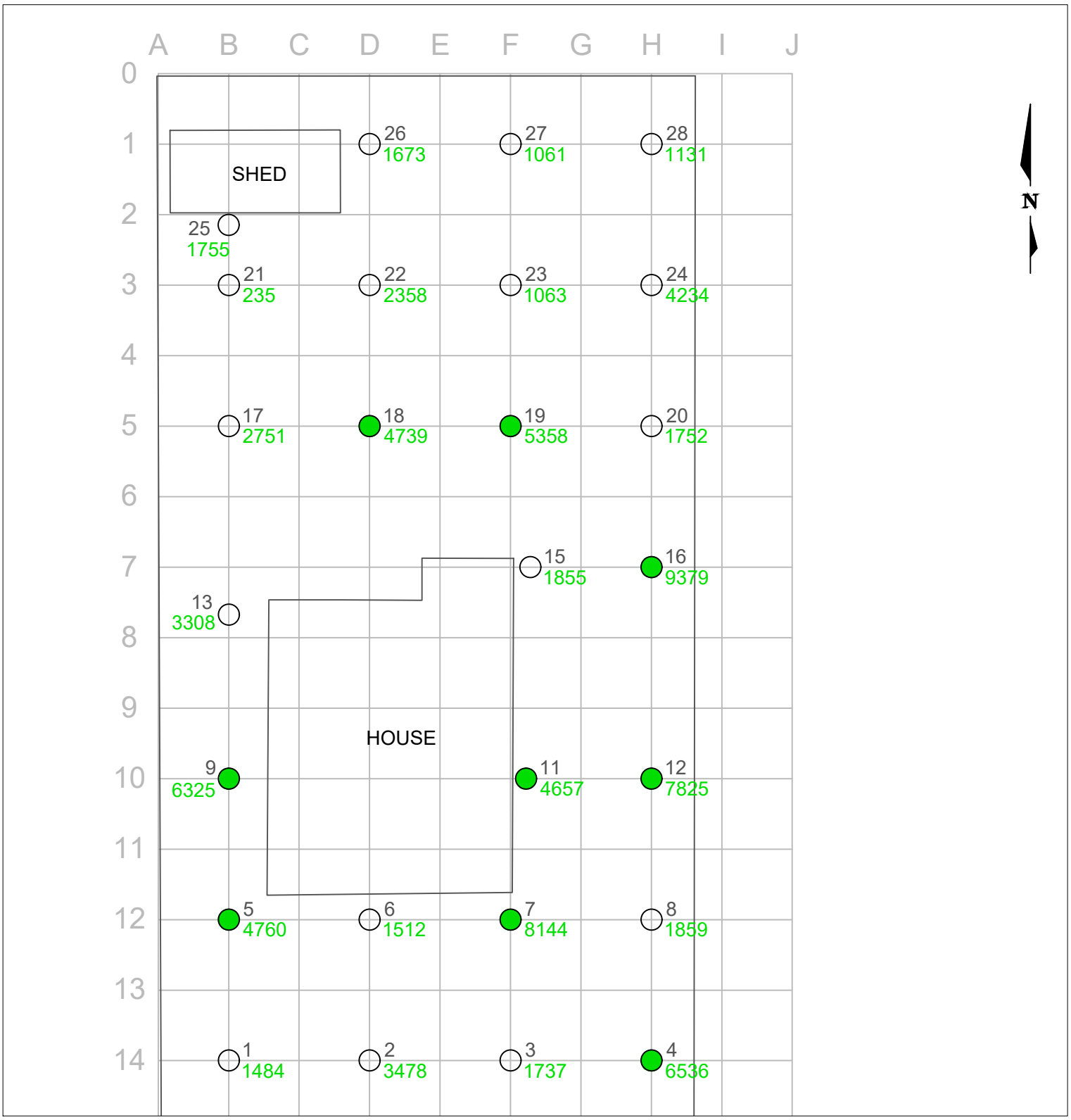
• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

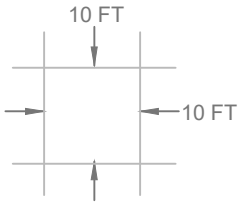
102 PATTIE AVE. - ROUND 1 RESULTS

Hurley Remedial Action

Golder Associates

2017_2019 Hurley Yards.dwg | Layout: 102 Pattie Ave | Modified: 01/16/2020, 11:11 | Plotted: 01/16/2020, 11:12





LEGEND:

REQUIRES CLEANUP

Sample Location Number
Post Mitigation Copper Results
Tree/Bush

DOES NOT REQUIRE CLEANUP

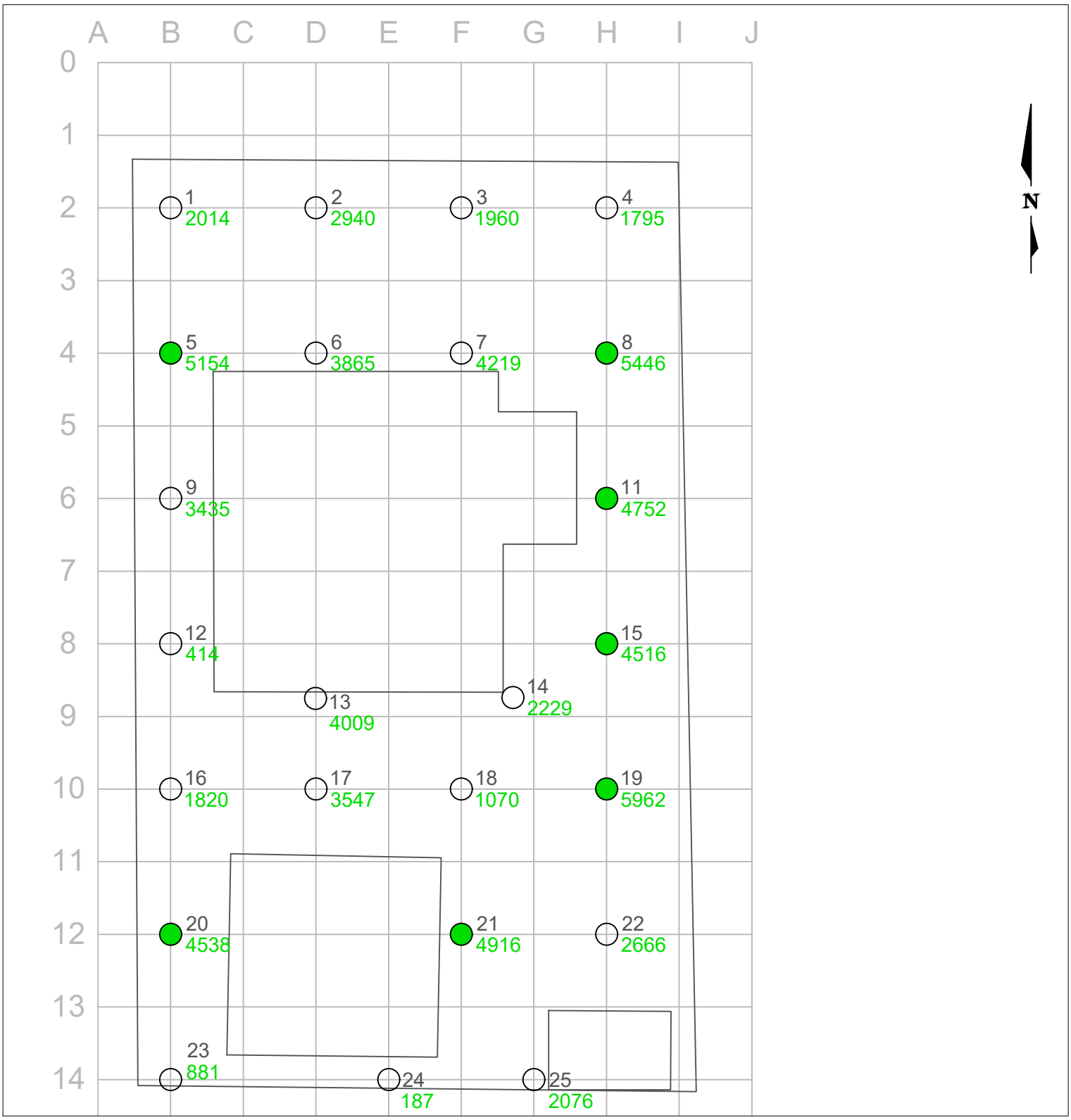
Sample Location Number
XRF Copper Results

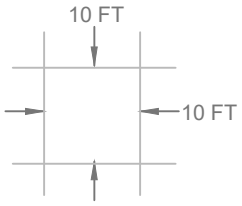
• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

102 ROMERO AVE. - ROUND 1 RESULTS

Hurley Remedial Action

Golder Associates





LEGEND:

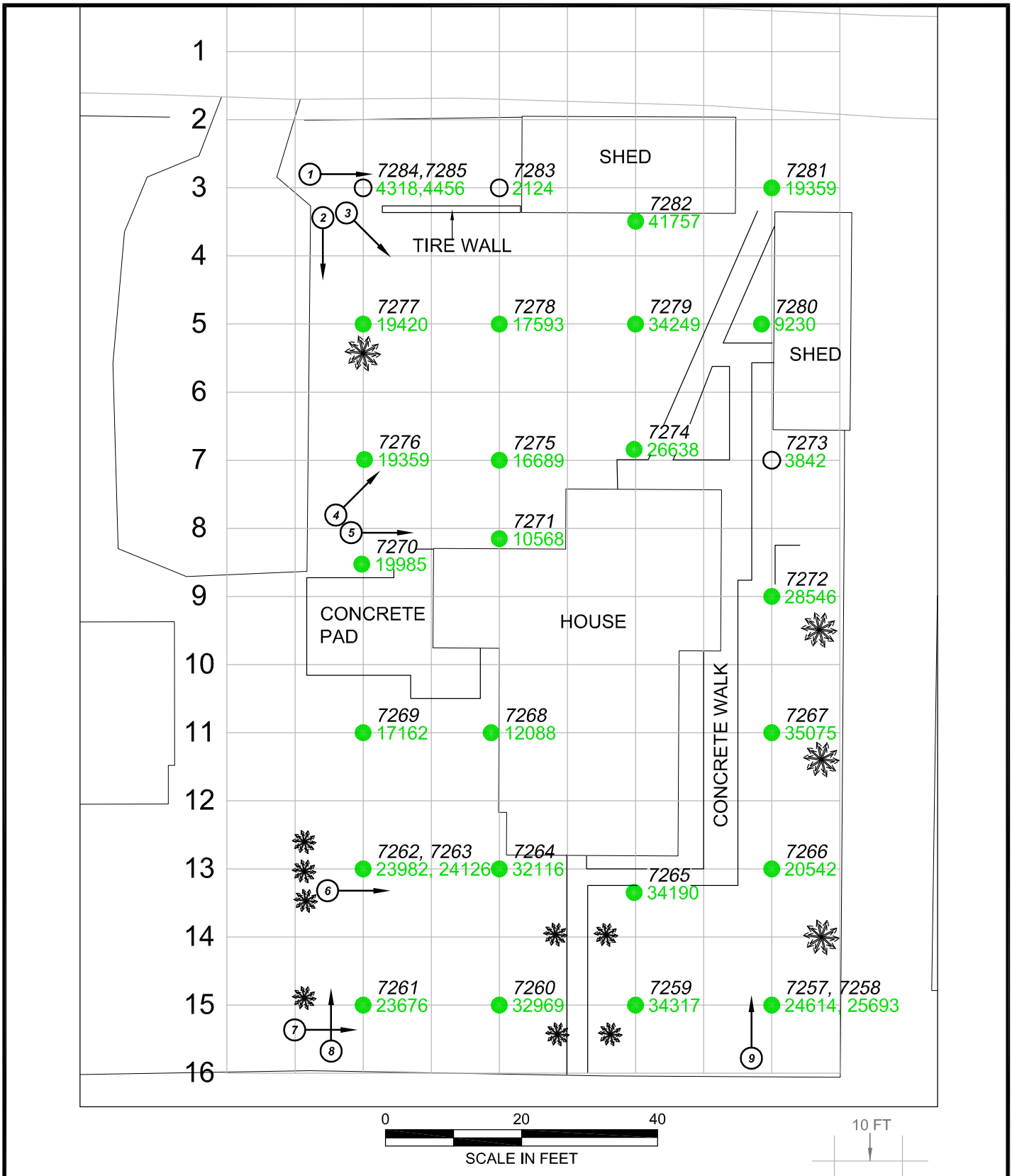
REQUIRES CLEANUP	DOES NOT REQUIRE CLEANUP
Sample Location Number	Sample Location Number
Post Mitigation Copper Results	XRF Copper Results
Tree/Bush	

• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

314 ROMERO AVE. - ROUND 1 RESULTS

Hurley Remedial Action

Golder Associates



LEGEND

REQUIRES CLEANUP
- Sample Location Number
- XRF Copper Results
- Laboratory Copper Results
- Photo Number and Direction

DOES NOT REQUIRE CLEANUP
- Sample Location Number
- XRF Copper Results
- Laboratory Copper Results
- Tree/Bush

• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department

Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

2 SANTA RITA AVENUE
ROUND 1 RESULTS
HURLEY REMEDIAL ACTION

Santa Rita 2.dwg | Layout: Santa Rita 2 - R1 | Modified: 08/19/2007, 07:39 | Plotted: 09/22/2007, 09:50

Golder Associates

10 FT

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LEGEND:

Remediated 2019
Sample Location Number
Post Mitigation Copper Results
Tree/Bush

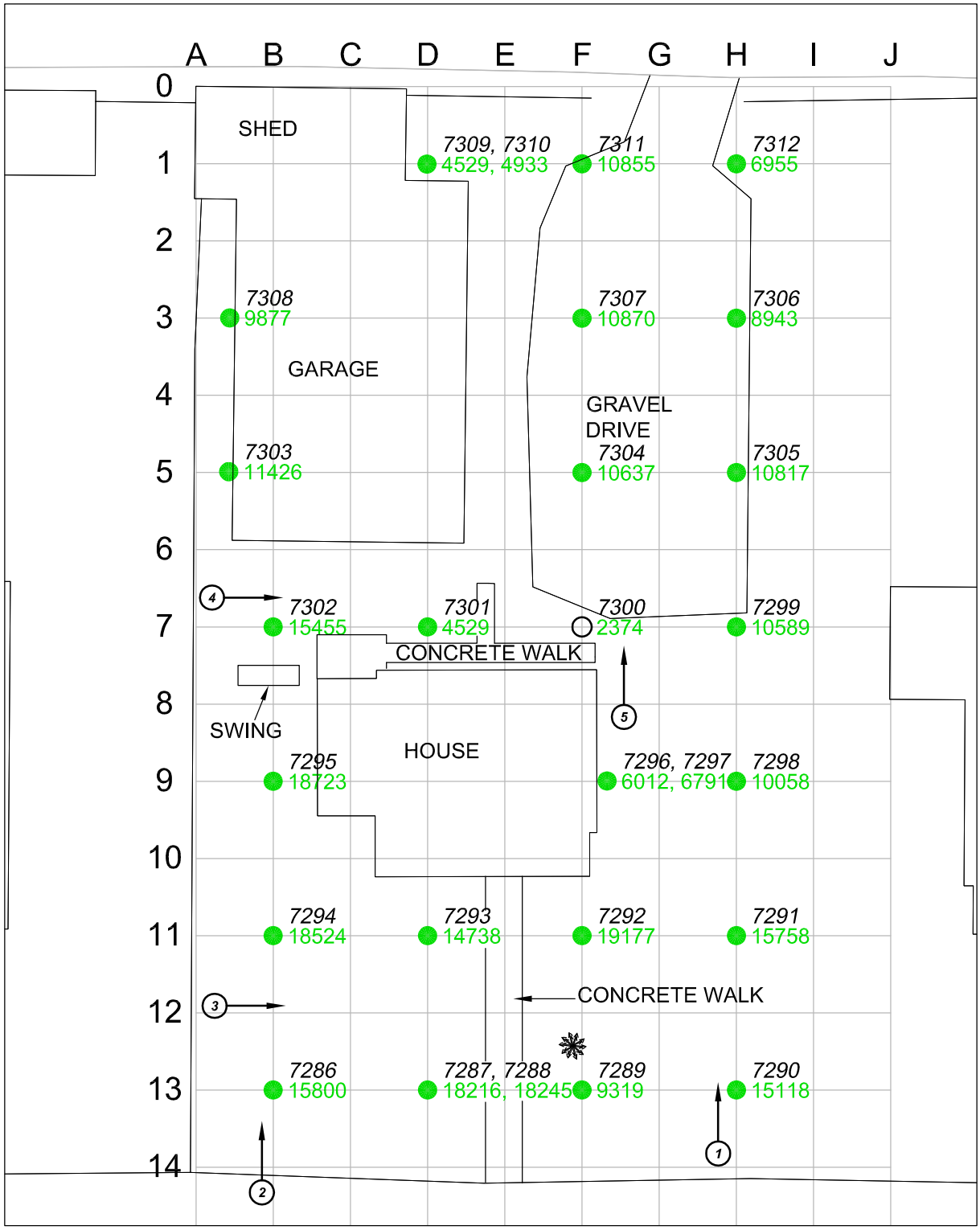
DOES NOT REQUIRE CLEANUP
Sample Location Number
Previously Mitigated 2007

• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

2 SANTA RITA AVE. - FINAL RESULTS

Hurley Remedial Action

Golder Associates



N

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LEGEND

REQUIRES CLEANUP
- Sample Location Number
- XRF Copper Results
- Laboratory Copper Results
- Photo Number and Direction

DOES NOT REQUIRE CLEANUP
- Sample Location Number
- XRF Copper Results
- Laboratory Copper Results

Tree/Bush

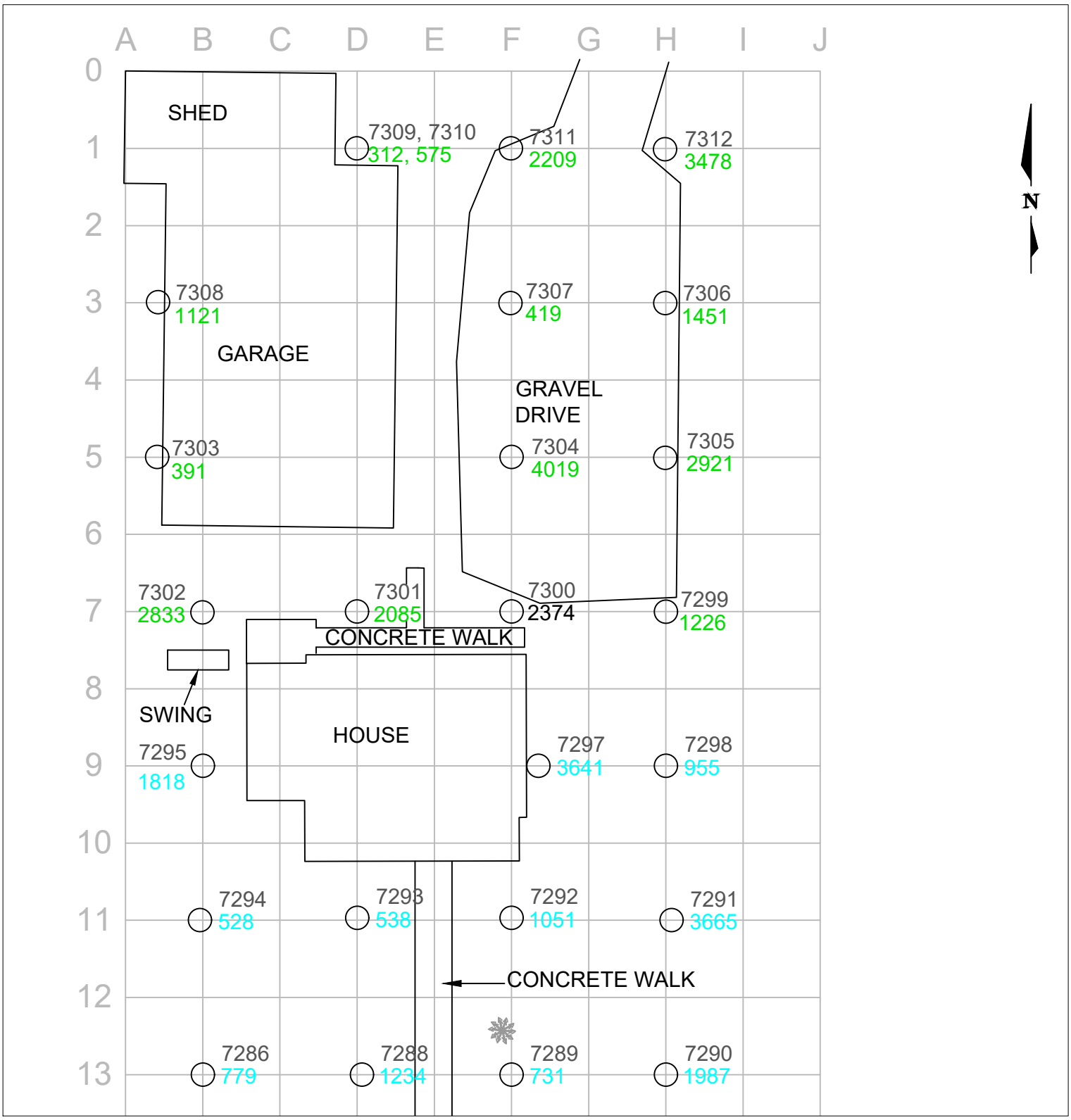
• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department

Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

3 SANTA RITA AVENUE
ROUND 1 RESULTS
HURLEY REMEDIAL ACTION

Santa Rita 3.dwg | Layout: Santa Rita 3 - R1 | Modified: 08/19/2007, 07:39 | Plotted: 09/22/2007, 09:53

Golder Associates



10 FT

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LEGEND:

Remediated 2019
Sample Location Number
Post Mitigation Copper Results
Tree/Bush

DOES NOT REQUIRE CLEANUP
Sample Location Number
Previously Mitigated 2007

• Cleanup Level = 5,000 ppm copper, per New Mexico Environment Department
Note: XRF (X-RAY Fluorescence Analyzer) results greater than 4,500 ppm require cleanup due to 500 ppm margin of error for this instrument. ppm= parts per million

3 SANTA RITA AVE. - FINAL RESULTS

Hurley Remedial Action

Golder Associates

APPENDIX B

XRF Data

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#1	11/7/2017					
#2	11/7/2017	SiO2	<LOD	8	<LOD	15
#3	11/7/2017	2710a	3371	32	47001	330
#4	11/7/2017	2711a	127	5	23480	155
#5	11/7/2017	14734	102	4	23011	111
#6	11/7/2017	12457	106	4	37885	165
#7	11/7/2017	28863	153	4	25522	124
#8	11/7/2017	15675	127	4	25498	123
#9	11/7/2017	23325	447	6	16597	86
#10	11/7/2017	16896	391	6	22960	111
#11	11/7/2017	23436	556	7	18540	96
#12	11/7/2017	R1-01-502D	4819	27	30270	147
#13	11/7/2017	R1-01-502D	4770	27	30079	146
#14	11/7/2017	R1-01-502D	4833	28	30275	148
#15	11/7/2017	R1-02-502D	3801	24	35728	176
#16	11/7/2017	R1-02-502D	3785	24	35513	175
#17	11/7/2017	R1-02-502D	3365	22	26948	137
#18	11/7/2017	R1-03-502D	803	9	20151	105
#19	11/7/2017	R1-03-502D	807	9	20110	104
#20	11/7/2017	R1-03-502D	825	9	23122	118
#21	11/7/2017	R1-04-502D	5328	31	28716	148
#22	11/7/2017	R1-04-502D	5344	31	28563	147
#23	11/7/2017	R1-04-502D	5252	31	29949	154
#24	11/7/2017	R1-05-502D	6616	36	45969	221
#25	11/7/2017	R1-05-502D	6612	36	46119	221
#26	11/7/2017	R1-05-502D	6241	35	42985	208
#27	11/7/2017	SiO2	<LOD	5.7	<LOD	11
#28	11/7/2017					
#29	11/7/2017	R1-06-502D	1109	10	25238	127
#30	11/7/2017	R1-06-502D	1102	10	25392	128
#31	11/7/2017	R1-06-502D	1129	11	23997	122
#32	11/7/2017	R1-07-502D	4882	29	33988	173
#33	11/7/2017	R1-07-502D	4940	30	33813	173
#34	11/7/2017	R1-07-502D	5522	32	39603	195
#35	11/7/2017	R1-08-502D	3390	21	27885	134
#36	11/7/2017	R1-08-502D	3382	21	27754	133
#37	11/7/2017	R1-08-502D	3442	21	28658	137
#38	11/7/2017	R1-09-502D	1309	12	17671	96
#39	11/7/2017	R1-09-502D	1320	12	17721	96
#40	11/7/2017	R1-09-502D	1317	12	18201	99
#41	11/7/2017	R1-10-502D	27911	139	64001	321
#42	11/7/2017	R1-10-502D	27923	139	64200	322
#43	11/7/2017	R1-10-502D	27893	139	65269	327
#44	11/7/2017	R1-11-502D	2650	18	34573	166
#45	11/7/2017	R1-11-502D	2668	18	34905	168
#46	11/7/2017	R1-11-502D	2570	17	33044	158
#47	11/7/2017	R1-12-502D	592	8	23393	121
#48	11/7/2017	R1-12-502D	615	8	23420	122
#49	11/7/2017	R1-12-502D	500	7	24851	126

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#50	11/7/2017	R1-13-502D	12888	68	68131	337
#51	11/7/2017	R1-13-502D	12876	68	68480	338
#52	11/7/2017	R1-13-502D	12644	66	67581	332
#53	11/7/2017	R1-14-502D	993	9	17859	88
#54	11/7/2017	R1-14-502D	989	9	17957	89
#55	11/7/2017	R1-14-502D	853	8	16297	81
#56	11/7/2017	R1-15-502D	1057	10	20282	105
#57	11/7/2017	R1-15-502D	1059	10	20470	106
#58	11/7/2017	R1-15-502D	917	9	20430	107
#59	11/7/2017	SiO2	<LOD	5.9	<LOD	11
#60	11/7/2017					
#1	11/8/2017					
#2	11/8/2017	SiO2	<LOD	8	<LOD	15
#3	11/8/2017	2710a	3358	32	46670	327
#4	11/8/2017	2711a	124	5	23828	157
#5	11/8/2017	14734	91	4	22990	111
#6	11/8/2017	12457	115	4	41041	179
#7	11/8/2017	28863	148	4	24585	121
#8	11/8/2017	15675	127	4	26002	124
#9	11/8/2017	23325	413	6	16318	84
#10	11/8/2017	16896	478	6	23641	114
#11	11/8/2017	23436	568	7	18486	95
#12	11/8/2017	R1-01-305 Nev	1228	11	17955	92
#13	11/8/2017	R1-01-305 Nev	1216	11	18309	94
#14	11/8/2017	R1-01-305 Nev	1220	11	18445	95
#15	11/8/2017	R1-02-305 Nev	613	8	39072	185
#16	11/8/2017	R1-02-305 Nev	617	8	39129	185
#17	11/8/2017	R1-02-305 Nev	628	8	39313	186
#18	11/8/2017	R1-03-305 Nev	1182	11	26665	131
#19	11/8/2017	R1-03-305 Nev	1177	11	26544	130
#20	11/8/2017	R1-03-305 Nev	1181	11	26205	129
#21	11/8/2017	R1-04-305 Nev	493	7	23496	116
#22	11/8/2017	R1-04-305 Nev	484	7	23626	117
#23	11/8/2017	R1-04-305 Nev	486	7	24077	119
#24	11/8/2017	R1-05-305 Nev	2069	16	15583	87
#25	11/8/2017	R1-05-305 Nev	2059	15	15658	87
#26	11/8/2017	R1-05-305 Nev	1912	15	15129	86
#27	11/8/2017	R1-06-305 Nev	842	9	23480	117
#28	11/8/2017	R1-06-305 Nev	853	9	23771	119
#29	11/8/2017	R1-06-305 Nev	836	9	23486	117
#30	11/8/2017	R1-07-305 Nev	1152	11	43828	211
#31	11/8/2017	R1-07-305 Nev	1187	11	44441	215
#32	11/8/2017	R1-07-305 Nev	1268	11	30858	153
#33	11/8/2017	R1-08-305 Nev	1033	11	18899	105
#34	11/8/2017	R1-08-305 Nev	1045	11	18919	105
#35	11/8/2017	R1-08-305 Nev	1032	10	18524	101
#36	11/8/2017	R1-09-305 Nev	787	9	23341	116
#37	11/8/2017	R1-09-305 Nev	799	9	23210	116
#38	11/8/2017	R1-09-305 Nev	735	8	22095	112

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#39	11/8/2017	R1-10-305 Nev	823	9	31029	150
#40	11/8/2017	R1-10-305 Nev	817	9	31169	151
#41	11/8/2017	R1-10-305 Nev	891	9	32710	158
#42	11/8/2017	R1-11-305 Nev	519	7	18967	96
#43	11/8/2017	R1-11-305 Nev	539	7	19220	98
#44	11/8/2017	R1-11-305 Nev	527	7	18848	97
#45	11/8/2017	SiO2	<LOD	5.8	<LOD	10
#46	11/8/2017					
#47	11/8/2017	R1-12-305 Nev	1542	13	30274	146
#48	11/8/2017	R1-12-305 Nev	1560	13	30388	147
#49	11/8/2017	R1-12-305 Nev	1550	13	29668	143
#50	11/8/2017	R1-13-305 Nev	776	9	33027	159
#51	11/8/2017	R1-13-305 Nev	783	9	33013	159
#52	11/8/2017	R1-13-305 Nev	777	9	32322	156
#53	11/8/2017	R1-14-305 Nev	306	6	23387	117
#54	11/8/2017	R1-14-305 Nev	331	6	23599	118
#55	11/8/2017	R1-14-305 Nev	276	5	22556	112
#56	11/8/2017	R1-15-305 Nev	2320	16	27417	132
#57	11/8/2017	R1-15-305 Nev	2333	16	27329	132
#58	11/8/2017	R1-15-305 Nev	2318	16	28947	141
#59	11/8/2017	R1-16-305 Nev	791	9	24613	124
#60	11/8/2017	R1-16-305 Nev	786	9	24692	124
#61	11/8/2017	R1-16-305 Nev	787	9	25060	124
#62	11/8/2017	R1-17-305 Nev	1231	11	25439	123
#63	11/8/2017	R1-17-305 Nev	1227	11	25379	122
#64	11/8/2017	R1-17-305 Nev	1170	10	24633	118
#65	11/8/2017	R1-18-305 Nev	1421	12	37336	178
#66	11/8/2017	R1-18-305 Nev	1429	12	37268	178
#67	11/8/2017	R1-18-305 Nev	1409	12	36971	179
#68	11/8/2017	R1-19-305 Nev	1524	13	41020	192
#69	11/8/2017	R1-19-305 Nev	1501	12	40757	191
#70	11/8/2017	R1-19-305 Nev	1397	12	41692	197
#71	11/8/2017	SiO2	<LOD	5.8	<LOD	11
#72	11/8/2017					
#1	11/9/2017					
#2	11/9/2017	SiO2	<LOD	8	<LOD	15
#3	11/9/2017	2710a	3374	32	47060	331
#4	11/9/2017	2711a	127	5	23854	157
#5	11/9/2017	14734	87	4	23941	116
#6	11/9/2017	12457	108	4	39391	171
#7	11/9/2017	28863	137	4	26190	125
#8	11/9/2017	15675	128	4	26477	127
#9	11/9/2017	23325	424	6	16413	85
#10	11/9/2017	16896	442	6	23013	111
#11	11/9/2017	23436	543	7	18123	94
#12	11/9/2017	R1-20-305 Nev	1529	13	32900	163
#13	11/9/2017	R1-20-305 Nev	1515	13	32833	162
#14	11/9/2017	R1-20-305 Nev	1634	13	32115	160
#15	11/9/2017	R1-21-305 Nev	193	4	21035	101

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#16	11/9/2017	R1-21-305 Nev	187	4	20880	100
#17	11/9/2017	R1-21-305 Nev	190	4	21182	100
#18	11/9/2017	R1-22-305 Nev	171	4	18346	92
#19	11/9/2017	R1-22-305 Nev	176	4	18364	92
#20	11/9/2017	R1-22-305 Nev	162	4	18478	92
#21	11/9/2017	R1-23-305 Nev	723	8	24296	120
#22	11/9/2017	R1-23-305 Nev	728	8	24384	120
#23	11/9/2017	R1-23-305 Nev	700	8	25155	123
#24	11/9/2017	R1-24-305 Nev	1099	10	36853	172
#25	11/9/2017	R1-24-305 Nev	1097	10	37068	173
#26	11/9/2017	R1-24-305 Nev	1131	10	36814	173
#27	11/9/2017					
#28	11/9/2017	SiO2	<LOD	5.8	<LOD	10
#29	11/9/2017	R1-25-305 Nev	1213	11	35090	168
#30	11/9/2017	R1-25-305 Nev	1187	11	34687	166
#31	11/9/2017	R1-25-305 Nev	1126	10	33388	161
#32	11/9/2017	R1-26-305 Nev	795	8	28868	136
#33	11/9/2017	R1-26-305 Nev	792	8	28791	136
#34	11/9/2017	R1-26-305 Nev	806	8	29339	138
#35	11/9/2017	R1-27-305 Nev	1570	13	29885	143
#36	11/9/2017	R1-27-305 Nev	1571	13	30140	145
#37	11/9/2017	R1-27-305 Nev	1575	13	30689	148
#38	11/9/2017	R1-28-305 Nev	851	9	48523	232
#39	11/9/2017	R1-28-305 Nev	848	9	48619	232
#40	11/9/2017	R1-28-305 Nev	884	9	53726	253
#41	11/9/2017	R1-30-305 Nev	412	6	23083	116
#42	11/9/2017	R1-30-305 Nev	404	6	22840	115
#43	11/9/2017	R1-30-305 Nev	438	6	22661	114
#44	11/9/2017	R1-31-305 Nev	1944	15	26421	130
#45	11/9/2017	R1-31-305 Nev	1948	15	26284	130
#46	11/9/2017	R1-31-305 Nev	1938	14	25690	127
#47	11/9/2017	R1-33-305 Nev	994	9	31178	147
#48	11/9/2017	R1-33-305 Nev	989	10	31340	148
#49	11/9/2017	R1-33-305 Nev	1002	10	29562	140
#50	11/9/2017	R1-34-305 Nev	646	7	29611	139
#51	11/9/2017	R1-34-305 Nev	629	7	29806	140
#52	11/9/2017	R1-34-305 Nev	671	8	30363	141
#53	11/9/2017	SiO2	<LOD	5.9	<LOD	11
#54	11/9/2017					
#55	11/9/2017	R1-36-305 Nev	524	7	21448	108
#56	11/9/2017	R1-36-305 Nev	531	7	21347	108
#57	11/9/2017	R1-36-305 Nev	498	7	23937	121
#58	11/9/2017	R1-37-305 Nev	804	9	18757	100
#59	11/9/2017	R1-37-305 Nev	810	9	18753	100
#60	11/9/2017	R1-37-305 Nev	818	9	18958	100
#61	11/9/2017	R1-38-305 Nev	1036	10	32010	155
#62	11/9/2017	R1-38-305 Nev	1052	10	32252	156
#63	11/9/2017	R1-38-305 Nev	984	10	30438	147
#64	11/9/2017	R1-39-305 Nev	761	8	30976	147

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#65	11/9/2017	R1-39-305 Nev	736	8	30525	145
#66	11/9/2017	R1-39-305 Nev	765	8	30560	146
#67	11/9/2017	SiO2	<LOD	5.9	<LOD	11
#68	11/9/2017					
#1	11/10/2017					
#2	11/10/2017	SiO2	<LOD	8	<LOD	15
#3	11/10/2017	2710a	3389	32	46668	328
#4	11/10/2017	2711a	116	5	23860	158
#5	11/10/2017	14734	91	4	23196	112
#6	11/10/2017	12457	108	4	36474	160
#7	11/10/2017	28863	151	4	24428	118
#8	11/10/2017	15675	125	4	26173	125
#9	11/10/2017	23325	445	6	16386	85
#10	11/10/2017	16896	435	6	24039	117
#11	11/10/2017	23436	544	7	17907	93
#12	11/10/2017	R1-40-305 Nev	646	7	28416	133
#13	11/10/2017	R1-40-305 Nev	650	7	28505	133
#14	11/10/2017	R1-40-305 Nev	637	7	28791	134
#15	11/10/2017	R1-42-305 Nev	467	7	19932	103
#16	11/10/2017	R1-42-305 Nev	459	7	20037	104
#17	11/10/2017	R1-42-305 Nev	473	7	20178	105
#18	11/10/2017	R1-43-305 Nev	869	9	21029	108
#19	11/10/2017	R1-43-305 Nev	871	9	21195	109
#20	11/10/2017	R1-43-305 Nev	901	9	21488	109
#21	11/10/2017	R1-44-305 Nev	1101	10	30235	144
#22	11/10/2017	R1-44-305 Nev	1081	10	30060	143
#23	11/10/2017	R1-44-305 Nev	1091	10	30656	146
#24	11/10/2017	R1-45-305 Nev	607	7	24603	117
#25	11/10/2017	R1-45-305 Nev	597	7	24665	118
#26	11/10/2017	R1-45-305 Nev	596	7	24559	117
#27	11/10/2017	R1-46-305 Nev	947	9	25633	123
#28	11/10/2017	R1-46-305 Nev	929	9	25277	121
#29	11/10/2017	R1-46-305 Nev	921	9	24583	118
#30	11/10/2017	R1-47-305 Nev	825	8	26385	120
#31	11/10/2017	R1-47-305 Nev	834	8	26439	121
#32	11/10/2017	R1-47-305 Nev	817	8	25729	118
#33	11/10/2017	R1-48-305 Nev	921	9	28847	136
#34	11/10/2017	R1-48-305 Nev	927	9	28744	136
#35	11/10/2017	R1-48-305 Nev	933	9	29193	137
#36	11/10/2017	R1-49-305 Nev	973	9	23885	116
#37	11/10/2017	R1-49-305 Nev	990	9	24214	118
#38	11/10/2017	R1-49-305 Nev	924	9	23771	115
#39	11/10/2017					
#40	11/10/2017	SiO2	<LOD	5.8	<LOD	10
#41	11/10/2017	R1-50-305 Nev	890	9	27504	129
#42	11/10/2017	R1-50-305 Nev	903	9	27636	131
#43	11/10/2017	R1-50-305 Nev	916	9	28258	133
#44	11/10/2017					
#45	11/10/2017	R1-51-305 Nev	995	9	27884	130

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#46	11/10/2017	R1-51-305 Nev	987	9	27881	130
#47	11/10/2017	R1-51-305 Nev	1060	10	27798	130
#48	11/10/2017	R1-52-305 Nev	992	9	28991	134
#49	11/10/2017	R1-52-305 Nev	993	9	29105	135
#50	11/10/2017	R1-52-305 Nev	1003	9	30806	142
#51	11/10/2017	R1-53-305 Nev	1126	10	26121	125
#52	11/10/2017	R1-53-305 Nev	1134	10	26429	127
#53	11/10/2017	R1-53-305 Nev	1163	10	26352	126
#54	11/10/2017	R1-54-305 Nev	152	4	23193	111
#55	11/10/2017	R1-54-305 Nev	163	4	23395	112
#56	11/10/2017	R1-54-305 Nev	176	4	23123	111
#57	11/10/2017	R1-55-305 Nev	356	6	20897	104
#58	11/10/2017	R1-55-305 Nev	350	6	20957	105
#59	11/10/2017	R1-55-305 Nev	367	6	21455	108
#60	11/10/2017	R1-56-305 Nev	1311	11	19170	99
#61	11/10/2017	R1-56-305 Nev	1299	11	19298	100
#62	11/10/2017	R1-56-305 Nev	1245	11	20286	104
#63	11/10/2017	R1-01-102 Pat	1022	10	26210	127
#64	11/10/2017	R1-01-102 Pat	1015	10	26192	127
#65	11/10/2017	R1-01-102 Pat	1015	10	26098	126
#66	11/10/2017					
#67	11/10/2017	SiO2	<LOD	5.9	<LOD	10
#68	11/10/2017	R1-02-102 Pat	1572	12	27112	130
#69	11/10/2017	R1-02-102 Pat	1562	12	26795	128
#70	11/10/2017	R1-02-102 Pat	1578	12	26097	126
#71	11/10/2017	R1-03-102 Pat	1091	10	24037	119
#72	11/10/2017	R1-03-102 Pat	1101	10	24129	119
#73	11/10/2017	R1-03-102 Pat	1112	10	23681	116
#74	11/10/2017	R1-04-102 Pat	1009	9	19299	90
#75	11/10/2017	R1-04-102 Pat	1017	9	19193	89
#76	11/10/2017	R1-04-102 Pat	1054	9	19304	90
#77	11/10/2017	R1-05-102 Pat	1224	11	28763	135
#78	11/10/2017	R1-05-102 Pat	1251	11	29193	137
#79	11/10/2017	R1-05-102 Pat	1279	11	30823	146
#80	11/10/2017	R1-06-102 Pat	1040	10	33350	159
#81	11/10/2017	R1-06-102 Pat	1047	10	33022	157
#82	11/10/2017	R1-06-102 Pat	1061	10	33050	157
#83	11/10/2017	R1-07-102 Pat	1299	11	36324	173
#84	11/10/2017	R1-07-102 Pat	1296	11	36388	173
#85	11/10/2017	R1-07-102 Pat	1355	12	38308	182
#86	11/10/2017	R1-08-102 Pat	1331	11	27321	128
#87	11/10/2017	R1-08-102 Pat	1330	11	27286	127
#88	11/10/2017	R1-08-102 Pat	1324	11	25819	121
#89	11/10/2017	R1-09-102 Pat	1444	11	22729	109
#90	11/10/2017	R1-09-102 Pat	1431	11	23100	111
#91	11/10/2017	R1-09-102 Pat	1505	12	25514	121
#92	11/10/2017					
#93	11/10/2017	SiO2	<LOD	5.8	<LOD	11
#94	11/10/2017	R1-10-102 Pat	1037	10	26516	128

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#95	11/10/2017	R1-10-102 Pat	1038	10	26560	128
#96	11/10/2017	R1-10-102 Pat	1049	10	27178	131
#97	11/10/2017	R1-11-102 Pat	1084	10	32218	148
#98	11/10/2017	R1-11-102 Pat	1106	10	32478	150
#99	11/10/2017	R1-11-102 Pat	981	9	32662	151
#100	11/10/2017	R1-12-102 Pat	1831	14	29229	139
#101	11/10/2017	R1-12-102 Pat	1846	14	29512	141
#102	11/10/2017	R1-12-102 Pat	1802	13	27168	130
#103	11/10/2017					
#104	11/10/2017	SiO2	<LOD	6	<LOD	10
#1	11/13/2017					
#2	11/13/2017	SiO2	<LOD	8	<LOD	15
#3	11/13/2017	2710a	3374	32	47139	331
#4	11/13/2017	2711a	122	5	23979	159
#5	11/13/2017	14734	84	4	23563	113
#6	11/13/2017	12457	112	4	40741	177
#7	11/13/2017	28863	140	4	23862	116
#8	11/13/2017	15675	132	4	25564	122
#9	11/13/2017	23325	439	6	16920	87
#10	11/13/2017	16896	429	6	22975	110
#11	11/13/2017	23436	544	7	17814	92
#12	11/13/2017	R1-13-102 Pat	1984	14	20880	101
#13	11/13/2017	R1-13-102 Pat	1989	14	21033	102
#14	11/13/2017	R1-13-102 Pat	2035	14	21478	103
#15	11/13/2017	R1-14-102 Pat	1131	11	32790	159
#16	11/13/2017	R1-14-102 Pat	1137	11	32634	158
#17	11/13/2017	R1-14-102 Pat	1162	11	33439	161
#18	11/13/2017	R1-15-102 Pat	1213	11	31084	147
#19	11/13/2017	R1-15-102 Pat	1224	11	31437	149
#20	11/13/2017	R1-15-102 Pat	1161	10	29741	141
#21	11/13/2017	R1-16-102 Pat	2229	15	25422	122
#22	11/13/2017	R1-16-102 Pat	2235	15	25408	122
#23	11/13/2017	R1-16-102 Pat	2116	15	24609	118
#24	11/13/2017	R1-17-102 Pat	2520	17	31830	155
#25	11/13/2017	R1-17-102 Pat	2516	17	32042	156
#26	11/13/2017	R1-17-102 Pat	2540	18	31094	152
#27	11/13/2017	R1-18-102 Pat	2803	18	29601	140
#28	11/13/2017	R1-18-102 Pat	2849	18	29794	141
#29	11/13/2017	R1-18-102 Pat	2748	18	29077	137
#30	11/13/2017	R1-19-102 Pat	1877	13	18938	92
#31	11/13/2017	R1-19-102 Pat	1871	13	18804	92
#32	11/13/2017	R1-19-102 Pat	2140	14	17178	85
#33	11/13/2017	R1-20-102 Pat	1665	13	28894	134
#34	11/13/2017	R1-20-102 Pat	1656	13	28750	134
#35	11/13/2017	R1-20-102 Pat	1687	13	29209	137
#36	11/13/2017	R1-21-102 Pat	1153	11	29233	143
#37	11/13/2017	R1-21-102 Pat	1157	11	29384	144
#38	11/13/2017	R1-21-102 Pat	1165	11	28435	139
#39	11/13/2017					

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#40	11/13/2017	SiO2	<LOD	5.8	<LOD	10
#41	11/13/2017	R1-22-102 Pat	1350	12	25533	128
#42	11/13/2017	R1-22-102 Pat	1368	12	25544	128
#43	11/13/2017	R1-22-102 Pat	1391	12	24720	124
#44	11/13/2017	R1-23-102 Pat	1563	13	26071	129
#45	11/13/2017	R1-23-102 Pat	1558	13	26190	130
#46	11/13/2017	R1-23-102 Pat	1516	12	27109	134
#47	11/13/2017	R1-24-102 Pat	1044	10	26410	126
#48	11/13/2017	R1-24-102 Pat	1035	10	26272	125
#49	11/13/2017	R1-24-102 Pat	1025	10	27881	132
#50	11/13/2017	R1-25-102 Pat	1744	13	33566	157
#51	11/13/2017	R1-25-102 Pat	1752	13	33328	156
#52	11/13/2017	R1-25-102 Pat	1809	13	31940	150
#53	11/13/2017	R1-26-102 Pat	1651	13	17749	91
#54	11/13/2017	R1-26-102 Pat	1649	13	17873	92
#55	11/13/2017	R1-26-102 Pat	1638	13	17815	91
#56	11/13/2017	R1-27-102 Pat	1810	13	19105	94
#57	11/13/2017	R1-27-102 Pat	1825	13	19205	95
#58	11/13/2017	R1-27-102 Pat	1922	14	19537	96
#59	11/13/2017	R1-27-102 Pat	1487	37	24813	409
#60	11/13/2017					
#61	11/13/2017					
#62	11/13/2017					
#63	11/13/2017	SiO2	<LOD	5.7	<LOD	10
#64	11/13/2017	R1-28-102 Pat	1869	14	28675	141
#65	11/13/2017	R1-28-102 Pat	1869	14	28785	141
#66	11/13/2017	R1-28-102 Pat	1876	14	28377	140
#67	11/13/2017	R1-29-102 Pat	1691	13	26431	130
#68	11/13/2017	R1-29-102 Pat	1714	13	26575	130
#69	11/13/2017	R1-29-102 Pat	1727	13	26534	131
#70	11/13/2017					
#71	11/13/2017	SiO2	<LOD	5.7	<LOD	10
#1	6/27/2018					
#2	6/27/2018	SiO2	<LOD	8	<LOD	13
#3	6/27/2018	2710a	3415	31	47560	325
#4	6/27/2018	2711a	120	5	23887	153
#5	6/27/2018					
#6	6/27/2018					
#7	6/27/2018					
#8	6/27/2018	14734	86	3	23415	109
#9	6/27/2018	12457	99	3	39463	167
#10	6/27/2018	28863	145	4	25490	118
#11	6/27/2018	15675	124	4	25457	118
#12	6/27/2018	23325	452	6	16866	84
#13	6/27/2018	23325	485	6	23665	110
#14	6/27/2018	23436	542	7	18218	91
#15	6/27/2018	R1-01-102Rom	1479	11	25775	116
#16	6/27/2018	R1-01-102Rom	1463	11	25903	116
#17	6/27/2018	R1-01-102Rom	1509	11	26510	119

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#18	6/27/2018	R1-02-102Rom	3416	21	57874	262
#19	6/27/2018	R1-02-102Rom	3444	21	58206	264
#20	6/27/2018	R1-02-102Rom	3573	22	59776	268
#21	6/27/2018	R1-03-102Rom	1771	13	38762	176
#22	6/27/2018	R1-03-102Rom	1788	13	39065	178
#23	6/27/2018	R1-03-102Rom	1651	13	36952	168
#24	6/27/2018	R1-04-102Rom	6536	34	36660	171
#25	6/27/2018	R1-04-102Rom	6524	34	36961	173
#26	6/27/2018	R1-04-102Rom	6547	34	37226	173
#27	6/27/2018	R1-05-102Rom	4944	26	32830	148
#28	6/27/2018	R1-05-102Rom	4896	26	32755	148
#29	6/27/2018	R1-05-102Rom	4440	24	32392	146
#30	6/27/2018					
#31	6/27/2018	SiO2	<LOD	5.7	<LOD	10
#32	6/27/2018	R1-06-102Rom	1504	12	30664	141
#33	6/27/2018	R1-06-102Rom	1514	12	30840	142
#34	6/27/2018	R1-06-102Rom	1519	12	31337	145
#35	6/27/2018	R1-07-102Rom	8085	41	52633	238
#36	6/27/2018	R1-07-102Rom	8200	42	53273	242
#37	6/27/2018	R1-07-102Rom	8146	42	51802	237
#38	6/27/2018	R1-08-102Rom	1748	43	26303	428
#39	6/27/2018	R1-08-102Rom	1875	42	26204	396
#40	6/27/2018	CalCheck	4140	105	1773152	22743
#41	6/27/2018					
#42	6/27/2018	R1-08-102Rom	1906	14	27021	127
#43	6/27/2018	R1-08-102Rom	1924	14	27458	130
#44	6/27/2018	R1-08-102Rom	1844	13	27181	127
#45	6/27/2018	R1-09-102Rom	6162	32	30961	145
#46	6/27/2018	R1-09-102Rom	6224	32	30669	144
#47	6/27/2018	R1-09-102Rom	6590	34	30455	143
#48	6/27/2018	R1-11-102Rom	4594	27	33708	167
#49	6/27/2018	R1-11-102Rom	4594	28	33672	168
#50	6/27/2018	R1-11-102Rom	4782	28	33558	165
#51	6/27/2018	R1-12-102Rom	7864	42	51280	241
#52	6/27/2018	R1-12-102Rom	7890	42	51391	242
#53	6/27/2018	R1-12-102Rom	7721	41	51239	242
#54	6/27/2018	R1-13-102Rom	3302	20	36527	167
#55	6/27/2018	R1-13-102Rom	3293	20	36488	166
#56	6/27/2018	R1-13-102Rom	3330	20	34631	158
#57	6/27/2018					
#58	6/27/2018	SiO2	<LOD	5.6	<LOD	10
#59	6/27/2018	R1-15-102Rom	1797	14	22494	113
#60	6/27/2018	R1-15-102Rom	1761	14	22477	113
#61	6/27/2018	R1-15-102Rom	2008	15	23019	117
#62	6/27/2018	R1-16-102Rom	9318	48	62639	293
#63	6/27/2018	R1-16-102Rom	9285	48	62404	290
#64	6/27/2018	R1-16-102Rom	9534	49	61684	288
#65	6/27/2018	R1-17-102Rom	2678	17	28804	135
#66	6/27/2018	R1-17-102Rom	2693	17	28866	136

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#67	6/27/2018	R1-17-102Rom	2882	18	30142	141
#68	6/27/2018	R1-18-102Rom	4691	26	28632	135
#69	6/27/2018	R1-18-102Rom	4732	26	28867	135
#70	6/27/2018	R1-18-102Rom	4793	27	29626	140
#71	6/27/2018	R1-19-102Rom	5458	31	41012	198
#72	6/27/2018	R1-19-102Rom	5442	31	40827	197
#73	6/27/2018	R1-19-102Rom	5173	30	33988	167
#74	6/27/2018	R1-20-102Rom	1781	14	24923	124
#75	6/27/2018	R1-20-102Rom	1764	14	24878	123
#76	6/27/2018	R1-20-102Rom	1710	13	24362	119
#77	6/27/2018	R1-21-102Rom	229	5	33042	154
#78	6/27/2018	R1-21-102Rom	237	5	33341	156
#79	6/27/2018	R1-21-102Rom	239	5	31270	148
#80	6/27/2018					
#81	6/27/2018	SiO2	<LOD	5.9	<LOD	10
#1	6/28/2018					
#2	6/28/2018	SiO2	<LOD	8	<LOD	15
#3	6/28/2018	NIST 2710a	73	4	1019	18
#4	6/28/2018	NIST 2710a	3360	32	47046	330
#5	6/28/2018	NIST 2711a	121	5	23825	154
#6	6/28/2018	14734	91	4	23113	108
#7	6/28/2018	12457	101	3	36539	156
#8	6/28/2018	28863	134	4	24168	116
#9	6/28/2018	15675	131	4	26320	126
#10	6/28/2018	23325	419	6	17253	88
#11	6/28/2018	16896	465	6	23410	110
#12	6/28/2018	23436	583	7	18559	93
#13	6/28/2018	R1-22-102ROM	2360	16	35640	162
#14	6/28/2018	R1-22-102ROM	2324	16	35221	160
#15	6/28/2018	R1-22-102ROM	2390	16	34844	162
#16	6/28/2018	R1-23-102ROM	1105	9	18869	90
#17	6/28/2018	R1-23-102ROM	1101	9	18850	90
#18	6/28/2018	R1-23-102ROM	984	9	19520	93
#19	6/28/2018	R1-24-102ROM	4123	26	31059	159
#20	6/28/2018	R1-24-102ROM	4172	26	31158	160
#21	6/28/2018	R1-24-102ROM	4407	28	35612	183
#22	6/28/2018	R1-25-102ROM	1734	13	29172	134
#23	6/28/2018	R1-25-102ROM	1710	13	28867	132
#24	6/28/2018	R1-25-102ROM	1820	13	26942	123
#25	6/28/2018	R1-26-102ROM	1721	13	23327	112
#26	6/28/2018	R1-26-102ROM	1696	13	23081	111
#27	6/28/2018	R1-26-102ROM	1602	12	24697	119
#28	6/28/2018	Cal Check				
#29	6/28/2018	Si02	<LOD	5.8	<LOD	10
#30	6/28/2018	R1-27-102ROM	1071	10	15259	79
#31	6/28/2018	R1-27-102ROM	1074	10	15329	79
#32	6/28/2018	R1-27-102ROM	1038	9	13916	71
#33	6/28/2018	R1-28-102ROM	1074	10	36374	175
#34	6/28/2018	R1-28-102ROM	1093	11	36599	177

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#35	6/28/2018	R1-28-102ROM	1226	11	35331	171
#36	6/28/2018	Calc Check				
#37	6/28/2018	SiO2	<LOD	6	<LOD	10
#38	6/28/2018					
#39	6/28/2018					
#40	6/28/2018	Cal Check				
#41	6/28/2018	Si02	<LOD	5.8	<LOD	10
#42	6/28/2018	R1-01-314ROM	1999	16	40836	204
#43	6/28/2018	R1-01-314ROM	2036	16	41539	209
#44	6/28/2018	R1-01-314ROM	2008	16	39845	205
#45	6/28/2018	R1-02-314ROM	2934	19	32015	157
#46	6/28/2018	R1-02-314ROM	2976	20	32081	157
#47	6/28/2018	R1-02-314ROM	2909	21	30507	164
#48	6/28/2018	R1-03-314ROM	1971	15	35908	177
#49	6/28/2018	R1-03-314ROM	1979	15	35688	175
#50	6/28/2018	R1-03-314ROM	1931	16	38993	197
#51	6/28/2018	R1-04-314ROM	1815	14	33756	159
#52	6/28/2018	R1-04-314ROM	1813	14	33720	158
#53	6/28/2018	R1-04-314ROM	1756	13	33377	157
#54	6/28/2018	Cal Check				
#55	6/28/2018	SiO2	<LOD	5.7	<LOD	10
#56	6/28/2018	R1-05-314ROM	5210	29	30765	146
#57	6/28/2018	R1-05-314ROM	5211	29	30980	147
#58	6/28/2018	R1-05-314ROM	5040	28	30372	146
#59	6/28/2018	R1-06-314ROM	3810	23	50732	230
#60	6/28/2018	R1-06-314ROM	3800	23	50350	228
#61	6/28/2018	R1-06-314ROM	3984	23	51681	227
#62	6/28/2018	R1-07-314ROM	4155	27	51217	255
#63	6/28/2018	R1-07-314ROM	4125	27	50670	253
#64	6/28/2018	R1-07-314ROM	4378	29	48021	250
#65	6/28/2018	R1-08-314ROM	5333	29	42130	192
#66	6/28/2018	R1-08-314ROM	5316	29	42012	191
#67	6/28/2018	R1-08-314ROM	5689	32	45063	213
#68	6/28/2018	R1-09-314ROM	3402	21	31987	151
#69	6/28/2018	R1-09-314ROM	3480	21	32443	154
#70	6/28/2018	R1-09-314ROM	3423	21	32196	156
#71	6/28/2018	R1-11-314ROM	4763	27	36226	171
#72	6/28/2018	R1-11-314ROM	4575	27	36333	174
#73	6/28/2018	R1-11-314ROM	4919	27	36670	171
#74	6/28/2018	R1-12-314ROM	409	7	43126	207
#75	6/28/2018	R1-12-314ROM	403	7	43233	208
#76	6/28/2018	R1-12-314ROM	430	7	44514	214
#77	6/28/2018	R1-13-314ROM	3995	24	32415	155
#78	6/28/2018	R1-13-314ROM	3955	23	32187	153
#79	6/28/2018	R1-13-314ROM	4077	24	33119	156
#80	6/28/2018	Cal Check				
#81	6/28/2018	SiO2	<LOD	5.8	<LOD	10
#82	6/28/2018	R1-14-314ROM	2231	18	31124	168
#83	6/28/2018	R1-14-314ROM	2248	18	31092	168

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#84	6/28/2018	R1-14-314ROM	2207	17	28742	151
#85	6/28/2018	R1-15-314ROM	4566	27	47382	225
#86	6/28/2018	R1-15-314ROM	4571	27	47140	224
#87	6/28/2018	R1-15-314ROM	4411	27	46119	221
#88	6/28/2018	R1-16-314ROM	1876	14	38621	177
#89	6/28/2018	R1-16-314ROM	1904	14	38991	179
#90	6/28/2018	R1-16-314ROM	1680	13	38612	179
#91	6/28/2018	R1-17-314ROM	3519	21	32114	147
#92	6/28/2018	R1-17-314ROM	3506	21	32211	147
#93	6/28/2018	R1-17-314ROM	3615	21	33158	150
#94	6/28/2018	R1-18-314ROM	1054	9	18684	91
#95	6/28/2018	R1-18-314ROM	1082	10	18960	92
#96	6/28/2018	R1-18-314ROM	1074	9	18580	86
#97	6/28/2018	R1-19-314ROM	6282	33	46236	211
#98	6/28/2018	R1-19-314ROM	6254	33	46482	212
#99	6/28/2018	R1-19-314ROM	5351	30	45547	213
#100	6/28/2018	R1-20-314ROM	4640	25	39698	177
#101	6/28/2018	R1-20-314ROM	4655	26	40111	179
#102	6/28/2018	R1-20-314ROM	4320	24	39073	175
#103	6/28/2018	R1-21-314ROM	5150	28	24298	117
#104	6/28/2018	R1-21-314ROM	5085	28	24227	117
#105	6/28/2018	R1-21-314ROM	4512	26	24351	122
#106	6/28/2018	Cal Check				
#107	6/28/2018	SiO2	<LOD	5.7	<LOD	10
#108	6/28/2018	R1-22-314ROM	2655	17	12445	66
#109	6/28/2018	R1-22-314ROM	2645	17	12430	66
#110	6/28/2018	R1-22-314ROM	2697	17	12467	67
#111	6/28/2018	R1-23-314ROM	875	9	27956	135
#112	6/28/2018	R1-23-314ROM	881	9	28011	135
#113	6/28/2018	R1-23-314ROM	888	9	24181	120
#114	6/28/2018	R1-24-314ROM	189	4	14065	74
#115	6/28/2018	R1-24-314ROM	202	5	14159	75
#116	6/28/2018	R1-24-314ROM	171	4	12351	68
#117	6/28/2018	R1-25-314ROM	2043	16	19061	105
#118	6/28/2018	R1-25-314ROM	2000	16	18832	103
#119	6/28/2018	R1-25-314ROM	2184	16	18127	100
#1	8/1/2019	blank	0	14	0	21
#2	8/1/2019	nist2711a	152	5	23872	126
#3	8/1/2019	sscs 15675	168	6	26719	143
#4	8/1/2019	sscs 23325	520	9	19690	108
#5	8/1/2019	sscs 14734	114	5	24820	131
#6	8/1/2019	sscs 12457	129	5	35410	158
#7	8/1/2019	courtesy	6949	43	28804	156
#8	8/1/2019	sscs 23436	716	11	21859	119
#9	8/1/2019	sscs 18971	108	5	23969	126
#10	8/1/2019	courtesy	2747	19	17534	91
#11	8/1/2019	courtesy	129	5	17243	99
#12	8/1/2019	courtesy	4431	36	21754	144
#13	8/1/2019	courtesy	4011	28	21140	120

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#14	8/1/2019	courtesy	906	11	36537	175
#15	8/1/2019	courtesy	269	6	20082	110
#16	8/1/2019	courtesy	11609	57	25078	121
#17	8/1/2019	7308 R2	7261	24	31098	87
#18	8/1/2019	courtesy	1269	12	17725	95
#19	8/1/2019	7308 R3	1121	14	22814	130
#20	8/1/2019	7302 R2	2833	22	26306	132
#21	8/1/2019	7303 R2	6096	25	29409	104
#22	8/1/2019	7303 R3	5130	20	26616	81
#23	8/1/2019	7301 R2	2085	10	28105	80
#24	8/1/2019	7303 R4	391	4	19424	62
#25	8/1/2019	blank	8	2	0	21
#26	8/1/2019	nist2711a	157	5	23992	141
#1	8/2/2019	nist2711a	149	5	23427	126
#2	8/2/2019	blank	9	2	0	22
#3	8/2/2019	sscs 23436	710	11	20867	116
#4	8/2/2019	sscs 15675	172	6	28316	152
#5	8/2/2019	sscs 23325	535	9	19934	108
#6	8/2/2019	sscs 12457	137	5	37189	171
#7	8/2/2019	sscs 28863	203	6	25264	132
#8	8/2/2019	sscs 14734	113	5	25050	126
#9	8/2/2019	7299 R2	8979	52	32667	170
#10	8/2/2019	7270 R2	3945	28	28579	146
#11	8/2/2019	7270 R2 Dupe	3965	28	28667	145
#12	8/2/2019	7270 R2 Dupe	3948	28	28123	143
#13	8/2/2019	7270 R2 Dupe	3964	28	28299	143
#14	8/2/2019	7270 R2 Dupe	3983	28	28449	144
#15	8/2/2019	7270 R2 Dupe	3968	28	28390	144
#16	8/2/2019	7270 R2 Dupe	3979	28	28670	145
#17	8/2/2019	7270 R2 Dupe	3947	28	28238	142
#18	8/2/2019	7270 R2 Dupe	3981	28	28317	143
#19	8/2/2019	7270 R2 Dupe	3980	28	28581	144
#20	8/2/2019	7270 R2 Dupe	4002	28	28231	142
#21	8/2/2019	7304 R2	4990	20	41375	119
#22	8/2/2019	7304 R3	4019	16	30936	87
#23	8/2/2019	7307 R2	419	6	73082	248
#24	8/2/2019	7309 R2	5056	18	30255	82
#25	8/2/2019	7310 R2	4884	18	30259	83
#26	8/2/2019	7272 R2	185	3	25312	75
#27	8/2/2019	7309 R2	312	3	15236	45
#28	8/2/2019	7310 R2	575	5	27027	78
#29	8/2/2019	7311 R2	4610	17	24997	73
#30	8/2/2019	7311 R2 Dupe	4419	19	23448	78
#31	8/2/2019	7280 R2	9426	29	33152	91
#32	8/2/2019	7311 R3	5252	20	17685	62
#33	8/2/2019	7282 R2	2418	11	13872	46
#34	8/2/2019	7281 R2	5519	21	27153	83
#35	8/2/2019	7311 R4	2209	12	19227	64
#36	8/2/2019	blank	6	1	14	3

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#37	8/2/2019	nist2711a	163	5	23952	127
#38	8/2/2019	7279 R2	5949	38	35779	180
#39	8/2/2019	7274 R2	4946	33	26074	139
#40	8/2/2019	7274 R2 Dupe	4882	33	25616	135
#41	8/2/2019	7280 R3	3184	25	29971	155
#42	8/2/2019	7279 R3	1907	17	23622	123
#43	8/2/2019	7274 R3	2788	23	27953	146
#44	8/2/2019	7271 R2	2522	23	37524	198
#45	8/2/2019	7275 R2	11610	61	31408	158
#46	8/2/2019	7278 R2	4130	31	22575	131
#47	8/2/2019	sscs 28863	198	6	23256	125
#48	8/2/2019	sscs 14734	129	5	25251	134
#49	8/2/2019	sscs 12457	142	5	36988	172
#50	8/2/2019	7299 R3	7078	45	31730	169
#51	8/2/2019	7275 R3	2977	25	29176	161
#52	8/2/2019	7275 R3 Dupe	2920	23	28073	142
#53	8/2/2019	7299 R4	1226	16	25635	156
#54	8/2/2019	7276 R2	8722	49	35507	171
#55	8/2/2019	7277 R2	4837	28	19215	96
#56	8/2/2019	7277 R2	4790	28	19137	95
#57	8/2/2019	7277 R2	4859	28	19331	96
#58	8/2/2019	7277 R2	4823	28	19127	95
#59	8/2/2019	7277 R2	4794	28	19086	95
#60	8/2/2019	7277 R2	4792	28	19204	95
#61	8/2/2019	7277 R2	4866	28	19412	96
#62	8/2/2019	7277 R2	4818	28	19320	96
#63	8/2/2019	blank	8	2	46	6
#64	8/2/2019	nist2711a	167	5	23813	133
#1	8/5/2019	nist2711a	160	5	24113	137
#2	8/5/2019	blank	14	2	49	6
#3	8/5/2019	sscs 12457	133	5	33486	149
#4	8/5/2019	sscs 12457	132	5	33257	148
#5	8/5/2019	sscs 12457	131	4	33238	148
#6	8/5/2019	sscs 12457	127	4	33323	149
#7	8/5/2019	sscs 12457	123	4	33027	147
#8	8/5/2019	sscs 12457	128	4	32908	146
#9	8/5/2019	sscs 12457	132	5	33169	148
#10	8/5/2019	sscs 28863	194	6	28944	143
#11	8/5/2019	sscs 28863	202	6	29242	145
#12	8/5/2019	sscs 28863	204	6	29270	145
#13	8/5/2019	sscs 28863	195	6	29243	145
#14	8/5/2019	sscs 28863	195	6	28945	143
#15	8/5/2019	sscs 28863	207	6	29202	145
#16	8/5/2019	sscs 28863	216	6	29384	145
#17	8/5/2019	sscs 28863	215	6	28967	143
#18	8/5/2019	sscs 28863	196	6	29318	145
#19	8/5/2019	sscs 28863	195	6	29133	144
#20	8/5/2019	sscs 14734	115	5	24883	127
#21	8/5/2019	sscs 14734	118	5	24752	127

Table B-1: Hurley Yards Raw XRF Data 2017-2019

Reading	Date	Sample ID	Cu (mg/kg)	Cu +/-	Fe (mg/kg)	Fe +/-
#22	8/5/2019	sscs 14734	125	5	24956	128
#23	8/5/2019	sscs 14734	125	5	24904	128
#24	8/5/2019	sscs 14734	119	5	24771	127
#25	8/5/2019	sscs 14734	122	5	24557	126
#26	8/5/2019	sscs 14734	125	5	24871	130
#27	8/5/2019	sscs 14734	122	5	24847	129
#28	8/5/2019	sscs 14734	127	5	24936	130
#29	8/5/2019	7276 R3	4752	43	73771	428
#30	8/5/2019	7276 R3 Dupe	2715	24	49367	260
#31	8/5/2019	7276 R3 Dupe	4953	38	89379	430
#32	8/5/2019	7276 R4	1950	17	32181	148
#33	8/5/2019	7276 R4 Dupe	1532	14	25916	121
#34	8/5/2019	7276 R4 Dupe	1962	18	34078	169
#35	8/5/2019	7276 R4 Dupe	2002	17	31567	147
#36	8/5/2019	7276 R4	1903	17	31399	146
#37	8/5/2019	7305 R2	2921	22	28461	138
#38	8/5/2019	7305 R2 Dupe	2918	22	28562	135
#39	8/5/2019	7277 R2	4005	26	29880	140
#40	8/5/2019	blank	17	2	47	6
#41	8/5/2019	blank	0	14	0	21
#42	8/5/2019	nist2711a	158	5	24252	134
#43	8/5/2019	7306 R2	5587	32	25374	119
#44	8/5/2019	7281 R3	5612	33	25034	123
#45	8/5/2019	7281 R4	8948	51	25177	135
#46	8/5/2019	courtesy	327	4	8404	39
#47	8/5/2019	courtesy	649	11	5881	58
#48	8/5/2019	courtesy	3488	25	15882	95
#49	8/5/2019	courtesy	178	5	17113	87
#50	8/5/2019	7312 R2	3478	23	16717	88
#51	8/5/2019	7281 R5	2811	21	23450	117
#52	8/5/2019	7306 R3	1451	14	25756	124
#53	8/5/2019	7306 R3 Dupe	1474	15	25405	127
#54	8/5/2019	sscs 23325	531	9	19862	106
#55	8/5/2019	sscs 23325	525	9	19795	105
#56	8/5/2019	sscs 23325	533	9	19652	104
#57	8/5/2019	sscs 23325	533	9	19875	106
#58	8/5/2019	sscs 23325	525	9	19784	105
#59	8/5/2019	sscs 23325	529	9	19638	104
#60	8/5/2019	sscs 23325	527	9	19791	105
#61	8/5/2019	blank	0	14	0	20
#62	8/5/2019	nist2711a	155	5	23451	117

Table B-2: Daily Summary of XRF Analyses

Sample Date	Total Analysis Count	Total Sample Count [1]	Blank Count	NIST Count	SSCS Count	FD Count	Split Count
11/7/2017	45	15	2	0	0		1
11/8/2017	57	19	4	2	7		2
11/9/2017	51	17	4	2	7		2
11/10/2017	83	28	5	2	7		2
11/13/2017	52	17	4	2	7		3
6/27/2018	59	20	4	2	7		3
6/28/2018	93	31	8	3	7		2
8/1/2019	7	7	2	2	6		0
8/2/2019	36	36	3	6	6	13	5
8/5/2019	11	11	4	10	33	7	2
Total	**494**	**201**	**40**	**31**	**87**	**20**	**22**
5% of Total Samples		**10**					
Percent of Total Samples			**20%**	**15%**	**43%**	**10%**	**11%**

Notes:
1 Each sample collected prior to 2019 were analyzed three times
N = Total number of samples collected
NIST = National Institute of Standards and Technology

Table B-3: Evaluation of NIST and Site-Specific Calibration Standards

						Standard Results			%D		%RPD	
Reading	Date	OLD ID	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Cu	Fe	Cu	Fe
3	11/7/2017	2710a	NIST 2710a	3371	47001	2710a	3420	43200	1.4%	8.8%	1.4%	8.4%
#3	11/8/2017	2710a	NIST 2710a	3358	46670	2710a	3420	43200	1.8%	8.0%	1.8%	7.7%
3	11/9/2017	2710a	NIST 2710a	3374	47060	2710a	3420	43200	1.3%	8.9%	1.4%	8.6%
3	11/10/2017	2710a	NIST 2710a	3389	46668	2710a	3420	43200	0.9%	8.0%	0.9%	7.7%
#3	11/13/2017	2710a	NIST 2710a	3374	47139	2710a	3420	43200	1.3%	9.1%	1.4%	8.7%
69	6/27/2018	NIST 2710a	NIST 2710a	3360	47046	NIST 2710a	3420	43200	1.8%	8.9%	1.8%	8.5%
4	11/7/2017	2711a	NIST 2711a	127	23480	2711a	140	28200	9.3%	16.7%	9.7%	18.3%
#4	11/8/2017	2711a	NIST 2711a	124	23828	2711a	140	28200	11.4%	15.5%	12.1%	16.8%
4	11/9/2017	2711a	NIST 2711a	127	23854	2711a	140	28200	9.3%	15.4%	9.7%	16.7%
4	11/10/2017	2711a	NIST 2711a	116	23860	2711a	140	28200	17.1%	15.4%	18.8%	16.7%
#4	11/13/2017	2711a	NIST 2711a	122	23979	2711a	140	28200	12.9%	15.0%	13.7%	16.2%
70	6/27/2018	NIST 2711a	NIST 2711a	121	23825	NIST 2711a	140	28200	13.6%	15.5%	14.6%	16.8%
34	6/28/2018	nist2711a	NIST 2711a	152	23872	NIST 2711a	140	28200	8.6%	15.3%	8.2%	16.6%
58	8/1/2019	nist2711a	NIST 2711a	157	23992	NIST 2711a	140	28200	12.1%	14.9%	11.4%	16.1%
59	8/1/2019	nist2711a	NIST 2711a	149	23427	NIST 2711a	140	28200	6.4%	16.9%	6.2%	18.5%
95	8/2/2019	nist2711a	NIST 2711a	163	23952	NIST 2711a	140	28200	16.4%	15.1%	15.2%	16.3%
3	8/2/2019	nist2711a	NIST 2711a	167	23813	NIST 2711a	140	28200	19.3%	15.6%	17.6%	16.9%
4	8/2/2019	nist2711a	NIST 2711a	160	24113	NIST 2711a	140	28200	14.3%	14.5%	13.3%	15.6%
19	8/5/2019	nist2711a	NIST 2711a	158	24252	NIST 2711a	140	28200	12.9%	14.0%	12.1%	15.1%
39	8/5/2019	nist2711a	NIST 2711a	155	23451	NIST 2711a	140	28200	10.7%	16.8%	10.2%	18.4%
6	11/7/2017	12457	SSCS 12457	106	37885	12457	119	33900	10.9%	11.8%	11.6%	11.1%
#6	11/8/2017	12457	SSCS 12457	115	41041	12457	119	33900	3.4%	21.1%	3.4%	19.1%
6	11/9/2017	12457	SSCS 12457	108	39391	12457	119	33900	9.2%	16.2%	9.7%	15.0%
6	11/10/2017	12457	SSCS 12457	108	36474	12457	119	33900	9.2%	7.6%	9.7%	7.3%
#6	11/13/2017	12457	SSCS 12457	112	40741	12457	119	33900	5.9%	20.2%	6.1%	18.3%
1	6/27/2018	12457	SSCS 12457	101	36539	12457	119	33900	15.1%	7.8%	16.4%	7.5%
38	6/28/2018	sscs 12457	SSCS 12457	129	35410	12457	119	33900	8.4%	4.5%	8.1%	4.4%
64	8/1/2019	sscs 12457	SSCS 12457	137	37189	12457	119	33900	15.1%	9.7%	14.1%	9.3%
107	8/2/2019	sscs 12457	SSCS 12457	142	36988	12457	119	33900	19.3%	9.1%	17.6%	8.7%
6	8/2/2019	sscs 12457	SSCS 12457	133	33486	12457	119	33900	11.8%	1.2%	11.1%	1.2%
7	8/2/2019	sscs 12457	SSCS 12457	132	33257	12457	119	33900	10.9%	1.9%	10.4%	1.9%
8	8/2/2019	sscs 12457	SSCS 12457	131	33238	12457	119	33900	10.1%	2.0%	9.6%	2.0%
9	8/2/2019	sscs 12457	SSCS 12457	127	33323	12457	119	33900	6.7%	1.7%	6.5%	1.7%
10	8/2/2019	sscs 12457	SSCS 12457	123	33027	12457	119	33900	3.4%	2.6%	3.3%	2.6%
11	8/2/2019	sscs 12457	SSCS 12457	128	32908	12457	119	33900	7.6%	2.9%	7.3%	3.0%
12	8/2/2019	sscs 12457	SSCS 12457	132	33169	12457	119	33900	10.9%	2.2%	10.4%	2.2%
5	11/7/2017	14734	SSCS 14734	102	23011	14734	96	15800	6.3%	45.6%	6.1%	37.2%
5	11/8/2017	14734	SSCS 14734	91	22990	14734	96	15800	5.2%	45.5%	5.3%	37.1%
5	11/9/2017	14734	SSCS 14734	87	23941	14734	96	15800	9.4%	51.5%	9.8%	41.0%
5	11/10/2017	14734	SSCS 14734	91	23196	14734	96	15800	5.2%	46.8%	5.3%	37.9%

Table B-3: Evaluation of NIST and Site-Specific Calibration Standards

						Standard Results			%D		%RPD	
Reading	Date	OLD ID	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Cu	Fe	Cu	Fe
5	11/13/2017	14734	SSCS 14734	84	23563	14734	96	15800	12.5%	49.1%	13.3%	39.4%
71	6/27/2018	14734	SSCS 14734	91	23113	14734	96	15800	5.2%	46.3%	5.3%	37.6%
37	6/28/2018	sscs 14734	SSCS 14734	114	24820	14734	96	15800	18.8%	57.1%	17.1%	44.4%
66	8/1/2019	sscs 14734	SSCS 14734	113	25050	14734	96	15800	17.7%	58.5%	16.3%	45.3%
106	8/2/2019	sscs 14734	SSCS 14734	129	25251	14734	96	15800	34.4%	59.8%	29.3%	46.0%
23	8/5/2019	sscs 14734	SSCS 14734	115	24883	14734	96	15800	19.8%	57.5%	18.0%	44.7%
24	8/5/2019	sscs 14734	SSCS 14734	118	24752	14734	96	15800	22.9%	56.7%	20.6%	44.2%
25	8/5/2019	sscs 14734	SSCS 14734	125	24956	14734	96	15800	30.2%	57.9%	26.2%	44.9%
26	8/5/2019	sscs 14734	SSCS 14734	125	24904	14734	96	15800	30.2%	57.6%	26.2%	44.7%
1	8/5/2019	sscs 14734	SSCS 14734	119	24771	14734	96	15800	24.0%	56.8%	21.4%	44.2%
2	8/5/2019	sscs 14734	SSCS 14734	122	24557	14734	96	15800	27.1%	55.4%	23.9%	43.4%
3	8/5/2019	sscs 14734	SSCS 14734	125	24871	14734	96	15800	30.2%	57.4%	26.2%	44.6%
4	8/5/2019	sscs 14734	SSCS 14734	122	24847	14734	96	15800	27.1%	57.3%	23.9%	44.5%
5	8/5/2019	sscs 14734	SSCS 14734	127	24936	14734	96	15800	32.3%	57.8%	27.8%	44.9%
8	11/7/2017	15675	SSCS 15675	127	25498	15675	150	19500	15.3%	30.8%	16.6%	26.7%
#8	11/8/2017	15675	SSCS 15675	127	26002	15675	150	19500	15.3%	33.3%	16.6%	28.6%
8	11/9/2017	15675	SSCS 15675	128	26477	15675	150	19500	14.7%	35.8%	15.8%	30.3%
8	11/10/2017	15675	SSCS 15675	125	26173	15675	150	19500	16.7%	34.2%	18.2%	29.2%
#8	11/13/2017	15675	SSCS 15675	132	25564	15675	150	19500	12.0%	31.1%	12.8%	26.9%
3	6/27/2018	15675	SSCS 15675	131	26320	15675	150	19500	12.7%	35.0%	13.5%	29.8%
35	6/28/2018	sscs 15675	SSCS 15675	168	26719	15675	150	19500	12.0%	37.0%	11.3%	31.2%
62	8/1/2019	sscs 15675	SSCS 15675	172	28316	15675	150	19500	14.7%	45.2%	13.7%	36.9%
10	11/7/2017	16896	SSCS 16896	391	22960	16896	560	18000	30.2%	27.6%	35.5%	24.2%
#10	11/8/2017	16896	SSCS 16896	478	23641	16896	560	18000	14.6%	31.3%	15.8%	27.1%
10	11/9/2017	16896	SSCS 16896	442	23013	16896	560	18000	21.1%	27.9%	23.6%	24.4%
10	11/10/2017	16896	SSCS 16896	435	24039	16896	560	18000	22.3%	33.6%	25.1%	28.7%
#10	11/13/2017	16896	SSCS 16896	429	22975	16896	560	18000	23.4%	27.6%	26.5%	24.3%
5	6/27/2018	16896	SSCS 16896	465	23410	16896	560	18000	17.0%	30.1%	18.5%	26.1%
9	11/7/2017	23325	SSCS 23325	447	16597	23325	456	12100	2.0%	37.2%	2.0%	31.3%
#9	11/8/2017	23325	SSCS 23325	413	16318	23325	456	12100	9.4%	34.9%	9.9%	29.7%
9	11/9/2017	23325	SSCS 23325	424	16413	23325	456	12100	7.0%	35.6%	7.3%	30.3%
9	11/10/2017	23325	SSCS 23325	445	16386	23325	456	12100	2.4%	35.4%	2.4%	30.1%
#9	11/13/2017	23325	SSCS 23325	439	16920	23325	456	12100	3.7%	39.8%	3.8%	33.2%
4	6/27/2018	23325	SSCS 23325	419	17253	23325	456	12100	8.1%	42.6%	8.5%	35.1%
36	6/28/2018	sscs 23325	SSCS 23325	520	19690	23325	456	12100	14.0%	62.7%	13.1%	47.8%
63	8/1/2019	sscs 23325	SSCS 23325	535	19934	23325	456	12100	17.3%	64.7%	15.9%	48.9%
31	8/5/2019	sscs 23325	SSCS 23325	531	19862	23325	456	12100	16.4%	64.1%	15.2%	48.6%
32	8/5/2019	sscs 23325	SSCS 23325	525	19795	23325	456	12100	15.1%	63.6%	14.1%	48.3%
33	8/5/2019	sscs 23325	SSCS 23325	533	19652	23325	456	12100	16.9%	62.4%	15.6%	47.6%
34	8/5/2019	sscs 23325	SSCS 23325	533	19875	23325	456	12100	16.9%	64.3%	15.6%	48.6%

Table B-3: Evaluation of NIST and Site-Specific Calibration Standards

						Standard Results			%D		%RPD	
Reading	Date	OLD ID	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Sample ID	Cu (mg/kg)	Fe (mg/kg)	Cu	Fe	Cu	Fe
35	8/5/2019	sscs 23325	SSCS 23325	525	19784	23325	456	12100	15.1%	63.5%	14.1%	48.2%
36	8/5/2019	sscs 23325	SSCS 23325	529	19638	23325	456	12100	16.0%	62.3%	14.8%	47.5%
37	8/5/2019	sscs 23325	SSCS 23325	527	19791	23325	456	12100	15.6%	63.6%	14.4%	48.2%
11	11/7/2017	23436	SSCS 23436	556	18540	23436	634	15100	12.3%	22.8%	13.1%	20.5%
#11	11/8/2017	23436	SSCS 23436	568	18486	23436	634	15100	10.4%	22.4%	11.0%	20.2%
11	11/9/2017	23436	SSCS 23436	543	18123	23436	634	15100	14.4%	20.0%	15.5%	18.2%
11	11/10/2017	23436	SSCS 23436	544	17907	23436	634	15100	14.2%	18.6%	15.3%	17.0%
#11	11/13/2017	23436	SSCS 23436	544	17814	23436	634	15100	14.2%	18.0%	15.3%	16.5%
6	6/27/2018	23436	SSCS 23436	583	18559	23436	634	15100	8.0%	22.9%	8.4%	20.6%
40	6/28/2018	sscs 23436	SSCS 23436	716	21859	23436	634	15100	12.9%	44.8%	12.1%	36.6%
61	8/1/2019	sscs 23436	SSCS 23436	710	20867	23436	634	15100	12.0%	38.2%	11.3%	32.1%
7	11/7/2017	28863	SSCS 28863	153	25522	28863	145	21100	5.5%	21.0%	5.4%	19.0%
#7	11/8/2017	28863	SSCS 28863	148	24585	28863	145	21100	2.1%	16.5%	2.0%	15.3%
7	11/9/2017	28863	SSCS 28863	137	26190	28863	145	21100	5.5%	24.1%	5.7%	21.5%
7	11/10/2017	28863	SSCS 28863	151	24428	28863	145	21100	4.1%	15.8%	4.1%	14.6%
#7	11/13/2017	28863	SSCS 28863	140	23862	28863	145	21100	3.4%	13.1%	3.5%	12.3%
2	6/27/2018	28863	SSCS 28863	134	24168	28863	145	21100	7.6%	14.5%	7.9%	13.6%
65	8/1/2019	sscs 28863	SSCS 28863	203	25264	28863	145	21100	40.0%	19.7%	33.3%	18.0%
105	8/2/2019	sscs 28863	SSCS 28863	198	23256	28863	145	21100	36.6%	10.2%	30.9%	9.7%
13	8/2/2019	sscs 28863	SSCS 28863	194	28944	28863	145	21100	33.8%	37.2%	28.9%	31.3%
14	8/2/2019	sscs 28863	SSCS 28863	202	29242	28863	145	21100	39.3%	38.6%	32.9%	32.3%
15	8/2/2019	sscs 28863	SSCS 28863	204	29270	28863	145	21100	40.7%	38.7%	33.8%	32.4%
16	8/2/2019	sscs 28863	SSCS 28863	195	29243	28863	145	21100	34.5%	38.6%	29.4%	32.4%
17	8/2/2019	sscs 28863	SSCS 28863	195	28945	28863	145	21100	34.5%	37.2%	29.4%	31.4%
18	8/2/2019	sscs 28863	SSCS 28863	207	29202	28863	145	21100	42.8%	38.4%	35.2%	32.2%
19	8/2/2019	sscs 28863	SSCS 28863	216	29384	28863	145	21100	49.0%	39.3%	39.3%	32.8%
20	8/2/2019	sscs 28863	SSCS 28863	215	28967	28863	145	21100	48.3%	37.3%	38.9%	31.4%
21	8/5/2019	sscs 28863	SSCS 28863	196	29318	28863	145	21100	35.2%	38.9%	29.9%	32.6%
22	8/5/2019	sscs 28863	SSCS 28863	195	29133	28863	145	21100	34.5%	38.1%	29.4%	32.0%
	Minimum %D (absolute values)								0.9%	1.2%	0.9%	1.2%
	Maximum %D (absolute values)								49.0%	64.7%	39.3%	48.9%
	Number of Results								109	109	109	109
	Number < [35%]								101	62	105	79
	Percent < 35%								92.7%	56.9%	96.3%	72.5%

Notes:

% D = $((C_x-C_n)/C_n)*100$

Where: %D = percent differnce

C_x = Sample concentration from XRF measurement (ppm)

C_n= Certified concentration from NIST standard (mg/kg)

% RPD = $[((Cd-Cp)/((Cd+Cp)/2))]x100$

Where: %RPD = relative percent difference

C_d =Sample concentration from duplicate sample

C_p =Sample concentration from parent sample

Table B-3: Evaluation of NIST and Site-Specific Calibration Standards

						Standard Results			%D		%RPD	
Reading	**Date**	**OLD ID**	**Sample ID**	**Cu (mg/kg)**	**Fe (mg/kg)**	**Sample ID**	**Cu (mg/kg)**	**Fe (mg/kg)**	**Cu**	**Fe**	**Cu**	**Fe**

NIST = National Institute of Standards and Technology
SSCS = Site-Specific Calibration Standards
Standard Results = Certified NIST results for NIST samples, or accredited laboratory results for SSCS samples
Cells with blue fill have %Ds > 20%
Note: Standard Data Validation limit for Soils Standards testing is 35%.

Table B-4: Evaluation of Field Duplicate Samples

Date	Sample ID	Cu (mg/kg)	Fe (mg/kg)	FD ID	Cu (mg/kg)	Fe (mg/kg)	%D Cu	%D Fe
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3965	28667	0.5%	0.3%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3948	28123	0.1%	1.6%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3964	28299	0.5%	1.0%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3983	28449	1.0%	0.5%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3968	28390	0.6%	0.7%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3979	28670	0.9%	0.3%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3947	28238	0.1%	1.2%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3981	28317	0.9%	0.9%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	3980	28581	0.9%	0.0%
8/2/2019	7270 R2	3945	28579	7270 R2 Dupe	4002	28231	1.4%	1.2%
8/2/2019	7311 R2	4610	24997	7311 R2 Dupe	4419	23448	4.1%	6.2%
8/2/2019	7274 R2	4946	26074	7274 R2 Dupe	4882	25616	1.3%	1.8%
8/2/2019	7275 R3	2977	29176	7275 R3 Dupe	2920	28073	1.9%	3.8%
8/5/2019	7276 R3	4752	73771	7276 R3 Dupe	2715	49367	42.9%	33.1%
8/5/2019	7276 R3	4752	73771	7276 R3 Dupe	4953	89379	4.2%	21.2%
8/5/2019	7276 R4	1950	32181	7276 R4 Dupe	1532	25916	21.4%	19.5%
8/5/2019	7276 R4	1950	32181	7276 R4 Dupe	1962	34078	0.6%	5.9%
8/5/2019	7276 R4	1950	32181	7276 R4 Dupe	2002	31567	2.7%	1.9%
8/5/2019	7305 R2	2921	28461	7305 R2 Dupe	2918	28562	0.1%	0.4%
8/5/2019	7306 R3	1451	25756	7306 R3 Dupe	1474	25405	1.6%	1.4%
Minimum %D (absolute values)							0.1%	0.0%
Maximum %D (absolute values)							42.9%	33.1%
Number of Results							20	20
Number < [35%]							19	20
Percent < 35%							95.0%	100.0%

Notes:

% D = $((C_s-C_k)/C_k)*100$

Where: %D = percent differnce

C_s = Sample concentration from XRF measurement (ppm)

C_k= Certified concentration from NIST standard (mg/kg)

Cells with blue fill have %Ds > 20%

Note: Standard Data Validation limit for Soils Standards testing is 35%.

Table B-5: Evaluation of Blank Results

Date	Old ID	Sample ID	Cu (mg/kg)	Fe (mg/kg)
11/7/2017	SiO2	BLK	<LOD	<LOD
11/8/2017	SiO2	BLK	<LOD	<LOD
11/9/2017	SiO2	BLK	<LOD	<LOD
11/10/2017		BLK	<LOD	<LOD
11/13/2017		BLK	<LOD	<LOD
6/27/2018	SiO2	BLK	<LOD	<LOD
6/27/2018	SiO2	BLK	<LOD	<LOD
6/27/2018	SiO2	BLK	<LOD	<LOD
6/27/2018	SiO2	BLK	<LOD	<LOD
6/28/2018	blank	BLK	0	0
6/28/2018	Si02	BLK	<LOD	<LOD
6/28/2018	Si02	BLK	<LOD	<LOD
6/28/2018	SiO2	BLK	<LOD	<LOD
6/28/2018	SiO2	BLK	<LOD	<LOD
6/28/2018	SiO2	BLK	<LOD	<LOD
6/28/2018	SiO2	BLK	<LOD	<LOD
8/1/2019	blank	BLK	8	0
8/1/2019	blank	BLK	9	0
8/2/2019	blank	BLK	6	14
8/2/2019	blank	BLK	8	46
8/2/2019	blank	BLK	14	49
8/5/2019	blank	BLK	17	47
8/5/2019	blank	BLK	0	0
8/5/2019	blank	BLK	0	0
Count of Blank Results			**24**	**24**
Minimum Observed Blank Result			**0**	**0**
Maximum Observed Blank Result			**17**	**49**
Lowest Observed XRF Result			**152**	**12351**
Maximum Blank < Lowest XRF?			**Yes**	**Yes**

Table B-6: Evaluation of Split Sample Results

Property Address	Date	Sample ID	XRF Analyzer Results		Laborabory Confirmation Samples		%RPD	
			Cu	Fe	Cu	Fe	Cu	Pb
			ppm	ppm	ppm	ppm		
	7-Nov-17	R1-10-502D	27909	64490	22600	38800	5.3%	12.4%
	8-Nov-17	R1-05-305 Nev	2013	15457	1800	13900	2.8%	2.7%
	8-Nov-17	R1-15-305 Nev	2324	27898	1570	19300	9.7%	9.1%
	9-Nov-17	R1-25-305 Nev	1175	34388	840	22300	8.3%	10.7%
	9-Nov-17	R1-38-305 Nev	1024	31567	800	23200	6.1%	7.6%
	10-Nov-17	R1-49-305 Nev	962	23957	880	17700	2.2%	7.5%
	10-Nov-17	R1-04-102 Pat	1027	19265	884	15500	3.7%	5.4%
	13-Nov-17	R1-14-102 Pat	1143	32954	672	22800	13.0%	9.1%
	13-Nov-17	R1-24-102 Pat	1035	26854	957	20500	2.0%	6.7%
	13-Nov-17	R1-29-102 Pat	1711	26513	1690	19800	0.3%	7.2%
	27-Jun-18	R1-02-102Rom	3478	58619	1820	32500	15.6%	14.3%
	27-Jun-18	R1-07-102Rom	8144	52569	4320	32600	15.3%	11.7%
	27-Jun-18	R1-18-102Rom	4739	29042	2940	20100	11.7%	9.1%
	28-Jun-18	R1-04-314ROM	1795	33618	1190	22500	10.1%	9.9%
	28-Jun-18	R1-08-314ROM	5446	43068	5940	34900	2.2%	5.2%
2 Santa Rita Ave	2-Aug-19	7270 R2	3945	28579	3680	19800	1.7%	9.1%
	2-Aug-19	7279 R3	1907	23622	1950	17600	0.6%	7.3%
	2-Aug-19	7277 R2	4837	19215	9500	27000	16.3%	8.4%
	5-Aug-19	7281 R3	5612	25034	5900	23000	1.3%	2.1%
	2-Aug-19	7299 R2	8979	32667	8510	25000	1.3%	6.6%
	2-Aug-19	7311 R2	4610	24997	4350	17900	1.5%	8.3%
	5-Aug-19	7306 R3	1451	25756	1220	17200	4.3%	10.0%
Count							**22**	**22**
Minimum							**0.3%**	**2.1%**
Maximum							**16.3%**	**14.3%**
Average							**6.2%**	**8.2%**
Count > 35%							**0**	**0**

APPENDIX C

Laboratory Data Sheets

One Government Gulch - PO Box 929
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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
R1-24-102Pat	X9L0375-01	Soil	11-Oct-17 15:42	YM	19-Dec-2019	
R1-29-102Pat	X9L0375-02	Soil	11-Oct-17 16:42	YM	19-Dec-2019	
R1-10-502D	X9L0375-03	Soil	11-Oct-17 10:45	YM	19-Dec-2019	
R1-05-305Nev	X9L0375-04	Soil	11-Oct-17 12:27	YM	19-Dec-2019	
R1-15-305Nev	X9L0375-05	Soil	11-Oct-17 14:54	YM	19-Dec-2019	
R1-25-305Nev	X9L0375-06	Soil	11-Oct-17 13:56	YM	19-Dec-2019	
R1-38-305Nev	X9L0375-07	Soil	11-Oct-17 11:55	YM	19-Dec-2019	
R1-49-305Nev	X9L0375-08	Soil	11-Oct-17 11:47	YM	19-Dec-2019	
R1-04-102Pat	X9L0375-09	Soil	11-Oct-17 16:53	YM	19-Dec-2019	
R1-14-102Pat	X9L0375-10	Soil	11-Oct-17 16:23	YM	19-Dec-2019	
R1-02-102Rom	X9L0375-11	Soil	13-Jun-18 11:11	YM	19-Dec-2019	
R1-07-102Rom	X9L0375-12	Soil	13-Jun-18 11:20	YM	19-Dec-2019	
R1-18-102Rom	X9L0375-13	Soil	13-Jun-18 11:33	YM	19-Dec-2019	
R1-04-314Rom	X9L0375-14	Soil	13-Jun-18 09:44	YM	19-Dec-2019	
R1-08-314Rom	X9L0375-15	Soil	13-Jun-18 09:59	YM	19-Dec-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9L0375

The state of origin only accredits for drinking water analyses.

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-24-102Pat**
SVL Sample ID: **X9L0375-01 (Soil)**

Sampled: 11-Oct-17 15:42
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	957	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:23	H3
EPA 6010D	**Iron**	20500	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:23	H3

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Dianne McGardner

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-29-102Pat**
SVL Sample ID: **X9L0375-02 (Soil)**

Sampled: 11-Oct-17 16:42
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1690	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:27	H3
EPA 6010D	**Iron**	19800	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:27	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-10-502D**
SVL Sample ID: **X9L0375-03 (Soil)**

Sampled: 11-Oct-17 10:45
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	22600	mg/kg	100	52.0	100	X952139	KH	01/03/20 12:11	D2,H3
EPA 6010D	**Iron**	38800	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:30	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-05-305Nev**
SVL Sample ID: **X9L0375-04 (Soil)**

Sampled: 11-Oct-17 12:27
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1800	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:43	H3
EPA 6010D	**Iron**	13900	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:43	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-15-305Nev**
SVL Sample ID: **X9L0375-05 (Soil)**

Sampled: 11-Oct-17 14:54
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1570	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:46	H3
EPA 6010D	**Iron**	19300	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:46	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-25-305Nev**
SVL Sample ID: **X9L0375-06 (Soil)**

Sampled: 11-Oct-17 13:56
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	840	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:49	H3
EPA 6010D	**Iron**	22300	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:49	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-38-305Nev**
SVL Sample ID: **X9L0375-07 (Soil)**

Sampled: 11-Oct-17 11:55
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	800	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:53	H3
EPA 6010D	**Iron**	23200	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:53	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-49-305Nev**
SVL Sample ID: **X9L0375-08 (Soil)**

Sampled: 11-Oct-17 11:47
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	880	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:56	H3
EPA 6010D	**Iron**	17700	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:56	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-04-102Pat**
SVL Sample ID: **X9L0375-09 (Soil)**

Sampled: 11-Oct-17 16:53
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	884	mg/kg	1.00	0.52		X952139	KH	01/03/20 10:59	H3
EPA 6010D	**Iron**	15500	mg/kg	20.0	6.6		X952139	KH	01/03/20 10:59	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-14-102Pat**
SVL Sample ID: **X9L0375-10 (Soil)**

Sampled: 11-Oct-17 16:23
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	672	mg/kg	1.00	0.52		X952139	KH	01/03/20 11:02	H3
EPA 6010D	**Iron**	22800	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:02	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-02-102Rom**
SVL Sample ID: **X9L0375-11 (Soil)**

Sampled: 13-Jun-18 11:11
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1820	mg/kg	1.00	0.52		X952139	KH	01/03/20 11:05	H3
EPA 6010D	**Iron**	32500	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:05	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-07-102Rom**
SVL Sample ID: **X9L0375-12 (Soil)**

Sampled: 13-Jun-18 11:20
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	4320	mg/kg	10.0	5.20	10	X952139	KH	01/03/20 11:58	D2,H3
EPA 6010D	**Iron**	32600	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:08	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-18-102Rom**
SVL Sample ID: **X9L0375-13 (Soil)**

Sampled: 13-Jun-18 11:33
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	2940	mg/kg	10.0	5.20	10	X952139	KH	01/03/20 12:01	D2,H3
EPA 6010D	**Iron**	20100	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:12	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-04-314Rom**
SVL Sample ID: **X9L0375-14 (Soil)**

Sampled: 13-Jun-18 09:44
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1190	mg/kg	1.00	0.52		X952139	KH	01/03/20 11:48	H3
EPA 6010D	**Iron**	22500	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:48	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Client Sample ID: **R1-08-314Rom**
SVL Sample ID: **X9L0375-15 (Soil)**

Sampled: 13-Jun-18 09:59
Received: 19-Dec-19
Sampled By: YM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	5940	mg/kg	10.0	5.20	10	X952139	KH	01/03/20 12:08	D2,H3
EPA 6010D	**Iron**	34900	mg/kg	20.0	6.6		X952139	KH	01/03/20 11:51	H3

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9L0375**
Reported: 06-Jan-20 12:22

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010D	Copper	mg/kg	<1.00	0.52	1.00	X952139	03-Jan-20	
EPA 6010D	Iron	mg/kg	<20.0	6.6	20.0	X952139	03-Jan-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010D	Copper	mg/kg	96.1	100	96.1	80 - 120	X952139	03-Jan-20	
EPA 6010D	Iron	mg/kg	910	1000	91.0	80 - 120	X952139	03-Jan-20	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	Copper	mg/kg	106	13.1	100	92.5	75 - 125	X952139	03-Jan-20	
EPA 6010D	Iron	mg/kg	9110	11300	1000	0.30R>S	75 - 125	X952139	03-Jan-20	M3

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010D	Copper	mg/kg	111	106	100	98.3	5.3	20	X952139	03-Jan-20	
EPA 6010D	Iron	mg/kg	13400	9110	1000	0.30R>S	37.8	20	X952139	03-Jan-20	M3

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Freeport McMoRan - Chino Mines	**Project Name: HWCIU - Hurley Yards XRF**
PO Box 10	Work Order: **X9L0375**
Bayard, NM 88023	Reported: 06-Jan-20 12:22

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H3	Sample was received and/or analysis requested past holding time.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
7299 R2	X9H0231-01	Soil	02-Aug-19 09:05	RP	08-Aug-2019	
7270 R2	X9H0231-02	Soil	02-Aug-19 09:15	RP	08-Aug-2019	
7311 R2	X9H0231-03	Soil	02-Aug-19 12:00	RP	08-Aug-2019	
7279 R3	X9H0231-04	Soil	02-Aug-19 14:45	RP	08-Aug-2019	
7277 R2	X9H0231-05	Soil	02-Aug-19 16:06	RP	08-Aug-2019	
7281 R3	X9H0231-06	Soil	05-Aug-19 14:16	RP	08-Aug-2019	
7306 R3	X9H0231-07	Soil	05-Aug-19 15:25	RP	08-Aug-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9H0231

The state of origin only accredits for drinking water analyses.

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7299 R2**
SVL Sample ID: **X9H0231-01 (Soil)**

Sampled: 02-Aug-19 09:05
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	8510	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:19	D2
EPA 6010D	**Iron**	25000	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:19	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Dianne Gardner
Project Manager

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Bayard, NM 88023

Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7270 R2**
SVL Sample ID: **X9H0231-02 (Soil)**

Sampled: 02-Aug-19 09:15
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	3680	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:23	D2
EPA 6010D	**Iron**	19800	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:23	D1

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7311 R2**
SVL Sample ID: **X9H0231-03 (Soil)**

Sampled: 02-Aug-19 12:00
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	4350	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:26	D2
EPA 6010D	**Iron**	17900	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:26	D1

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7279 R3**
SVL Sample ID: **X9H0231-04 (Soil)**

Sampled: 02-Aug-19 14:45
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1950	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:39	D2
EPA 6010D	**Iron**	17600	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:39	D1

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7277 R2**
SVL Sample ID: **X9H0231-05 (Soil)**

Sampled: 02-Aug-19 16:06
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	9500	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:43	D2
EPA 6010D	**Iron**	27000	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:43	D2

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7281 R3**
SVL Sample ID: **X9H0231-06 (Soil)**

Sampled: 05-Aug-19 14:16
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	5900	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:47	D2
EPA 6010D	**Iron**	23000	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:47	D2

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PO Box 10
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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Client Sample ID: **7306 R3**
SVL Sample ID: **X9H0231-07 (Soil)**

Sampled: 05-Aug-19 15:25
Received: 08-Aug-19
Sampled By: RP

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	1220	mg/kg	10.0	5.20	10	X933172	AS	08/20/19 12:51	D2
EPA 6010D	**Iron**	17200	mg/kg	200	66.0	10	X933172	AS	08/20/19 12:51	D1

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Project Name: HWCIU - Hurley Yards XRF
Work Order: **X9H0231**
Reported: 25-Aug-19 15:14

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010D	Copper	mg/kg	<1.00	0.52	1.00	X933172	20-Aug-19	
EPA 6010D	Iron	mg/kg	<20.0	6.6	20.0	X933172	20-Aug-19	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010D	Copper	mg/kg	97.9	100	97.9	80 - 120	X933172	20-Aug-19	
EPA 6010D	Iron	mg/kg	925	1000	92.5	80 - 120	X933172	20-Aug-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	Copper	mg/kg	119	19.9	100	98.8	75 - 125	X933172	20-Aug-19	
EPA 6010D	Iron	mg/kg	16800	15400	1000	0.30R>S	75 - 125	X933172	20-Aug-19	M3

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010D	Copper	mg/kg	125	119	100	105	5.5	20	X933172	20-Aug-19	
EPA 6010D	Iron	mg/kg	19200	16800	1000	0.30R>S	13.3	20	X933172	20-Aug-19	M3

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Freeport McMoRan - Chino Mines	**Project Name: HWCIU - Hurley Yards XRF**
PO Box 10	Work Order: **X9H0231**
Bayard, NM 88023	Reported: 25-Aug-19 15:14

Notes and Definitions

D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

CHAIN OF CUSTODY RECORD

SVL Analytical, Inc. • One Government Gulch • Kellogg, ID 83837 • (208) 784-1258 • FAX: (208) 783-0891

Work Order **X9L0375**

Freeport McMoRan - Chino Mines

Report to Company:	FMI/Golder
Contact:	Pam Pinson/Jen Pepe (Electronic Only)
Address:	PO Box 10
	Bayard, NM 88023
Phone Number:	575-912-5213 (Jen 575-388-0118)
FAX Number:	
E-mail:	pamela_pinson@fmi.com/jpepe@golder.com

Invoice Sent To:	Chino Mines Company
Contact:	Pam Pinson
Address:	PO Box 10
	Bayard, NM 88023
Phone Number:	575-912-5213
FAX Number:	
PO#:	ZN00000115

Table 1. -- Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other:

Project Name: Hurley Soils Investigation Unit - Yards

Sampler's Signature: On File

Indicate State of sample origination: NM **USACE?** ☐ Yes ☑ No

	Sample ID	Collection Date	Collection Time	Collected by: (Init.)	Misc. Matrix Type (From Table 1)	Misc. No. of Containers	Preservative(s) Unpreserved	HNO_3 Filtered	HNO_3 Unfiltered	HCl	H_2SO_4	NaOH	Other (Specify)	Analyses Required Total Metals	Rush Instructions (Days)	Comments
	Please take care to distinguish between: 1 and I, 2 and Z, 5 and S, Ø and O. Thanks!															Total metals: Cu and Fe only. cc results to: Jen_Pepe@golder.com
1	R1-24-102Pat	10/11/17	15:42	YM	3	1	X							X		
2	R1-29-102Pat	10/11/17	16:42	YM	3	1	X							X		
3	R1-10-502D	10/11/17	10:45	YM	3	1	X							X		
4	R1-05-305Nev	10/11/17	12:27	YM	3	1	X							X		
5	R1-15-305Nev	10/11/17	14:54	YM	3	1	X							X		
6	R1-25-305Nev	10/11/17	13:56	YM	3	1	X							X		
7	R1-38-305Nev	10/11/17	11:55	YM	3	1	X							X		
8	R1-49-305Nev	10/11/17	11:47	YM	3	1	X							X		
9	R1-04-102Pat	10/11/17	16:53	YM	3	1	X							X		
10	R1-14-102Pat	10/11/17	16:23	YM	3	1	X							X		

Relinquished by:	D. Robertson	Date:	12/11/19	Time:	18:00	Received by:	FedEx 7772 1855 8706	Date:	12/11/19	Time:	18:00
Relinquished by:		Date:		Time:		Received by:		Date:	12/19/19	Time:	1040

* Sample Reject: ☐ Return ☐ Dispose ☑ Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY

X9L0375

CHAIN OF CUSTODY RECORD

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FOR SVL USE ONLY
SVL JOB #

TEMP on Receipt:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other:

Report to Company: FMI/Golder
Contact: Pam Pinson/Jen Pepe (Electronic Only)
Address: PO Box 10
Bayard, NM 88023
Phone Number: 575-912-5213 (Jen 575-388-0118)
FAX Number:
E-mail: pamela_pinson@fmi.com/jpepe@golder.com

Invoice Sent To: Chino Mines Company
Contact: Pam Pinson
Address: PO Box 10
Bayard, NM 88023
Phone Number: 575-912-5213
FAX Number:
PO#: ZN00000115

Project Name: Hurley Soils Investigation Unit - Yards
Sampler's Signature: On File

Indicate State of sample origination: NM **USACE?** ☐ Yes ☑ No

	Sample ID	Collection Date	Time	Collected by: (Init.)	Matrix Type (From Table 1)	No. of Containers	Unpreserved	HNO_3 Filtered	HNO_3 Unfiltered	HCl	H_2SO_4	NaOH	Other (Specify)	Total Metals	Rush Instructions (Days)
1	R1-02-102Rom	6/13/18	11:11	YM	3	1	X							X	
2	R1-07-102Rom	6/13/18	11:20	YM	3	1	X							X	
3	R1-18-102Rom	6/13/18	11:33	YM	3	1	X							X	
4	R1-04-314ROM	6/13/18	9:44	YM	3	1	X							X	
5	R1-08-314ROM	6/13/18	9:59	YM	3	1	X							X	
6															
7															
8															
9															
10															

Please take care to distinguish between:
1 and I
2 and Z
5 and S
Ø and O
Thanks!

Comments: Total metals: Cu and Fe only
cc results to: Jen_Pepe@golder.com

Relinquished by: D. Munn	Date: 12/11/19	Time: 18:00	Received by: FedEx 7772 1855 5706	Date: 12/11/19	Time: 18:00
Relinquished by:	Date:	Time:	Received by:	Date: 12/19/19	Time: 1040

* Sample Reject: ☐ Return ☐ Dispose ☑ Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: _____ **By:** _____

SVL Work No: X940375

Item	Description	V	NA	Comments
1	Client or project name	✓		FMI-CHINO
2	Date and time of receipt at lab	✓		12/19/19 10:40
3	Received by	✓		ERIC BOUCK
4	Temperature blank or cooler temperature		✓	Temp. N/A °C
5	Were the sample(s) received on ice		✓	
6	Custody tape/bottle seals	✓		YES
7	Shipper's air bill	✓		
8	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓		GOOD
9	Analysis requested for each sample	✓		
10	Sample matrix description	✓		
11	The correct preservative for the analysis requested		✓	
12	Did an SVL employee preserve sample(s) upon receipt		✓	
13	Additional Information		✓	

V- Verified **NA- Not Applicable**

Comments:

_____

_____

_____

_____

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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
SW PEA GRAVEL	X9G0347-01	Soil/Rocks	12-Jul-19 13:05	AW	17-Jul-2019	
BASE COURSE MCCAULEY	X9G0347-02	Soil/Rocks	12-Jul-19 13:10	AW	17-Jul-2019	
MCCAULEY RED ROCK	X9G0347-03	Soil/Rocks	12-Jul-19 13:15	AW	17-Jul-2019	
MCCAULEY GRAY ROCK	X9G0347-04	Soil/Rocks	12-Jul-19 13:20	AW	17-Jul-2019	
SW NATIVE SOIL	X9G0347-05	Soil/Rocks	12-Jul-19 13:27	AW	17-Jul-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Client Sample ID: **SW PEA GRAVEL**
SVL Sample ID: **X9G0347-01 (Soil/Rocks)**

Sampled: 12-Jul-19 13:05
Received: 17-Jul-19
Sampled By: AW

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	9.49	mg/kg	1.00	0.52		X929228	AS	07/23/19 08:27	
EPA 6010D	**Iron**	12100	mg/kg	20.0	6.6		X929228	AS	07/23/19 08:27	M3
EPA 6010D	**Lead**	3.4	mg/kg	1.5	0.3		X929228	AS	07/23/19 08:27	
Percent Solids / Percent Moisture										
Percent Solids	**% Solids**	99.4	%	0.1			X929224	nt	07/19/19 13:30	
SPLP Extraction Parameters										
SW-846 1312	**Extract pH**	9.48	pH Units				X929206	ESB	07/19/19 13:30	
SPLP Leachates (Metals) Extracted: 07/19/19 13:30										
EPA 6010D	Arsenic	< 0.025	mg/L Extract	0.025	0.006		X929324	DJS	07/22/19 13:24	
EPA 6010D	**Barium**	0.0068	mg/L Extract	0.0040	0.0019		X929324	DJS	07/22/19 13:24	
EPA 6010D	Cadmium	< 0.0040	mg/L Extract	0.0040	0.0016		X929324	DJS	07/22/19 13:24	
EPA 6010D	Chromium	< 0.0060	mg/L Extract	0.0060	0.0020		X929324	DJS	07/22/19 13:24	
EPA 6010D	Copper	< 0.0100	mg/L Extract	0.0100	0.0027		X929324	DJS	07/22/19 13:24	
EPA 6010D	Lead	< 0.0150	mg/L Extract	0.0150	0.0049		X929324	DJS	07/22/19 13:24	
EPA 6010D	Selenium	< 0.040	mg/L Extract	0.040	0.012		X929324	DJS	07/22/19 13:24	
EPA 6010D	Silver	< 0.0100	mg/L Extract	0.0100	0.0019		X929324	DJS	07/22/19 13:24	
EPA 7470A	Mercury	< 0.00020	mg/L Extract	0.00020	0.000093		X929326	MWD	07/22/19 15:17	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Dianne Gardner
Project Manager

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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Client Sample ID: **BASE COURSE MCCAULEY**
SVL Sample ID: **X9G0347-02 (Soil/Rocks)**

Sampled: 12-Jul-19 13:10
Received: 17-Jul-19
Sampled By: AW

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	7.97	mg/kg	1.00	0.52		X929228	AS	07/23/19 08:36	
EPA 6010D	**Iron**	10200	mg/kg	20.0	6.6		X929228	AS	07/23/19 08:36	
EPA 6010D	**Lead**	9.6	mg/kg	1.5	0.3		X929228	AS	07/23/19 08:36	
Percent Solids / Percent Moisture										
Percent Solids	**% Solids**	99.4	%	0.1			X929224	nt	07/19/19 13:30	
SPLP Extraction Parameters										
SW-846 1312	**Extract pH**	9.45	pH Units				X929206	ESB	07/19/19 13:30	
SPLP Leachates (Metals) Extracted: 07/19/19 13:30										
EPA 6010D	Arsenic	< 0.025	mg/L Extract	0.025	0.006		X929324	DJS	07/22/19 13:35	
EPA 6010D	Barium	< 0.0040	mg/L Extract	0.0040	0.0019		X929324	DJS	07/22/19 13:35	
EPA 6010D	Cadmium	< 0.0040	mg/L Extract	0.0040	0.0016		X929324	DJS	07/22/19 13:35	
EPA 6010D	Chromium	< 0.0060	mg/L Extract	0.0060	0.0020		X929324	DJS	07/22/19 13:35	
EPA 6010D	Copper	< 0.0100	mg/L Extract	0.0100	0.0027		X929324	DJS	07/22/19 13:35	
EPA 6010D	Lead	< 0.0150	mg/L Extract	0.0150	0.0049		X929324	DJS	07/22/19 13:35	
EPA 6010D	Selenium	< 0.040	mg/L Extract	0.040	0.012		X929324	DJS	07/22/19 13:35	
EPA 6010D	Silver	< 0.0100	mg/L Extract	0.0100	0.0019		X929324	DJS	07/22/19 13:35	
EPA 7470A	Mercury	< 0.00020	mg/L Extract	0.00020	0.000093		X929326	MWD	07/22/19 15:24	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Client Sample ID: **MCCAULEY RED ROCK**
SVL Sample ID: **X9G0347-03 (Soil/Rocks)**

Sampled: 12-Jul-19 13:15
Received: 17-Jul-19
Sampled By: AW

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	58.2	mg/kg	1.00	0.52		X929228	AS	07/23/19 08:39	
EPA 6010D	**Iron**	32100	mg/kg	20.0	6.6		X929228	AS	07/23/19 08:39	
EPA 6010D	**Lead**	51.4	mg/kg	1.5	0.3		X929228	AS	07/23/19 08:39	
Percent Solids / Percent Moisture										
Percent Solids	**% Solids**	99.9	%	0.1			X929224	nt	07/19/19 13:30	
SPLP Extraction Parameters										
SW-846 1312	**Extract pH**	9.35	pH Units				X929206	ESB	07/19/19 13:30	
SPLP Leachates (Metals) Extracted: 07/19/19 13:30										
EPA 6010D	Arsenic	< 0.025	mg/L Extract	0.025	0.006		X929324	DJS	07/22/19 13:38	
EPA 6010D	**Barium**	0.0048	mg/L Extract	0.0040	0.0019		X929324	DJS	07/22/19 13:38	
EPA 6010D	Cadmium	< 0.0040	mg/L Extract	0.0040	0.0016		X929324	DJS	07/22/19 13:38	
EPA 6010D	Chromium	< 0.0060	mg/L Extract	0.0060	0.0020		X929324	DJS	07/22/19 13:38	
EPA 6010D	Copper	< 0.0100	mg/L Extract	0.0100	0.0027		X929324	DJS	07/22/19 13:38	
EPA 6010D	Lead	< 0.0150	mg/L Extract	0.0150	0.0049		X929324	DJS	07/22/19 13:38	
EPA 6010D	Selenium	< 0.040	mg/L Extract	0.040	0.012		X929324	DJS	07/22/19 13:38	
EPA 6010D	Silver	< 0.0100	mg/L Extract	0.0100	0.0019		X929324	DJS	07/22/19 13:38	
EPA 7470A	Mercury	< 0.00020	mg/L Extract	0.00020	0.000093		X929326	MWD	07/22/19 15:26	

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Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Client Sample ID: **MCCAULEY GRAY ROCK**
SVL Sample ID: **X9G0347-04 (Soil/Rocks)**

Sampled: 12-Jul-19 13:20
Received: 17-Jul-19
Sampled By: AW

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	5.55	mg/kg	1.00	0.52		X929228	AS	07/23/19 08:42	
EPA 6010D	**Iron**	4590	mg/kg	20.0	6.6		X929228	AS	07/23/19 08:42	
EPA 6010D	**Lead**	5.3	mg/kg	1.5	0.3		X929228	AS	07/23/19 08:42	
Percent Solids / Percent Moisture										
Percent Solids	**% Solids**	99.6	%	0.1			X929224	nt	07/19/19 13:30	
SPLP Extraction Parameters										
SW-846 1312	**Extract pH**	9.52	pH Units				X929206	ESB	07/19/19 13:30	
SPLP Leachates (Metals) Extracted: 07/19/19 13:30										
EPA 6010D	Arsenic	< 0.025	mg/L Extract	0.025	0.006		X929324	DJS	07/22/19 13:42	
EPA 6010D	Barium	< 0.0040	mg/L Extract	0.0040	0.0019		X929324	DJS	07/22/19 13:42	
EPA 6010D	Cadmium	< 0.0040	mg/L Extract	0.0040	0.0016		X929324	DJS	07/22/19 13:42	
EPA 6010D	Chromium	< 0.0060	mg/L Extract	0.0060	0.0020		X929324	DJS	07/22/19 13:42	
EPA 6010D	Copper	< 0.0100	mg/L Extract	0.0100	0.0027		X929324	DJS	07/22/19 13:42	
EPA 6010D	Lead	< 0.0150	mg/L Extract	0.0150	0.0049		X929324	DJS	07/22/19 13:42	
EPA 6010D	Selenium	< 0.040	mg/L Extract	0.040	0.012		X929324	DJS	07/22/19 13:42	
EPA 6010D	Silver	< 0.0100	mg/L Extract	0.0100	0.0019		X929324	DJS	07/22/19 13:42	
EPA 7470A	Mercury	< 0.00020	mg/L Extract	0.00020	0.000093		X929326	MWD	07/22/19 15:28	

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Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Client Sample ID: **SW NATIVE SOIL**
SVL Sample ID: **X9G0347-05 (Soil/Rocks)**

Sampled: 12-Jul-19 13:27
Received: 17-Jul-19
Sampled By: AW

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	**Copper**	130	mg/kg	1.00	0.52		X929228	AS	07/23/19 08:45	
EPA 6010D	**Iron**	23700	mg/kg	20.0	6.6		X929228	AS	07/23/19 08:45	
EPA 6010D	**Lead**	64.3	mg/kg	1.5	0.3		X929228	AS	07/23/19 08:45	
Percent Solids / Percent Moisture										
Percent Solids	**% Solids**	97.4	%	0.1			X929224	nt	07/19/19 13:30	
SPLP Extraction Parameters										
SW-846 1312	**Extract pH**	8.16	pH Units				X929206	ESB	07/19/19 13:30	
SPLP Leachates (Metals) Extracted: 07/19/19 13:30										
EPA 6010D	Arsenic	< 0.025	mg/L Extract	0.025	0.006		X929324	DJS	07/22/19 13:45	
EPA 6010D	**Barium**	0.185	mg/L Extract	0.0040	0.0019		X929324	DJS	07/22/19 13:45	
EPA 6010D	Cadmium	< 0.0040	mg/L Extract	0.0040	0.0016		X929324	DJS	07/22/19 13:45	
EPA 6010D	Chromium	< 0.0060	mg/L Extract	0.0060	0.0020		X929324	DJS	07/22/19 13:45	
EPA 6010D	**Copper**	0.109	mg/L Extract	0.0100	0.0027		X929324	DJS	07/22/19 13:45	
EPA 6010D	**Lead**	0.0319	mg/L Extract	0.0150	0.0049		X929324	DJS	07/22/19 13:45	
EPA 6010D	Selenium	< 0.040	mg/L Extract	0.040	0.012		X929324	DJS	07/22/19 13:45	
EPA 6010D	Silver	< 0.0100	mg/L Extract	0.0100	0.0019		X929324	DJS	07/22/19 13:45	
EPA 7470A	Mercury	< 0.00020	mg/L Extract	0.00020	0.000093		X929326	MWD	07/22/19 15:33	

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Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010D	Copper	mg/kg	<1.00	0.52	1.00	X929228	23-Jul-19	
EPA 6010D	Iron	mg/kg	<20.0	6.6	20.0	X929228	23-Jul-19	
EPA 6010D	Lead	mg/kg	<1.5	0.3	1.5	X929228	23-Jul-19	
SPLP Extraction Parameters								
SW-846 1312	Extract pH	pH Units	5.03			X929206	19-Jul-19	

Quality Control - EXTRACTION BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
SPLP Leachates (Metals) Extracted: 07/19/19 13:30 Batch: X929206								
EPA 6010D	Arsenic	mg/L Extract	<0.025	0.006	0.025	X929324	22-Jul-19	
EPA 6010D	Barium	mg/L Extract	<0.0040	0.0019	0.0040	X929324	22-Jul-19	
EPA 6010D	Cadmium	mg/L Extract	<0.0040	0.0016	0.0040	X929324	22-Jul-19	
EPA 6010D	Chromium	mg/L Extract	<0.0060	0.0020	0.0060	X929324	22-Jul-19	
EPA 6010D	Copper	mg/L Extract	<0.0100	0.0027	0.0100	X929324	22-Jul-19	
EPA 6010D	Lead	mg/L Extract	<0.0150	0.0049	0.0150	X929324	22-Jul-19	
EPA 6010D	Selenium	mg/L Extract	<0.040	0.012	0.040	X929324	22-Jul-19	
EPA 6010D	Silver	mg/L Extract	<0.0100	0.0019	0.0100	X929324	22-Jul-19	
EPA 7470A	Mercury	mg/L Extract	<0.00020	0.000093	0.00020	X929326	22-Jul-19	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010D	Copper	mg/kg	101	100	101	80 - 120	X929228	23-Jul-19	
EPA 6010D	Iron	mg/kg	1000	1000	100	80 - 120	X929228	23-Jul-19	
EPA 6010D	Lead	mg/kg	105	100	105	80 - 120	X929228	23-Jul-19	
SPLP Leachates (Metals)									
EPA 6010D	Arsenic	mg/L Extract	0.985	1.00	98.5	80 - 120	X929324	22-Jul-19	
EPA 6010D	Barium	mg/L Extract	1.02	1.00	102	80 - 120	X929324	22-Jul-19	
EPA 6010D	Cadmium	mg/L Extract	0.980	1.00	98.0	80 - 120	X929324	22-Jul-19	
EPA 6010D	Chromium	mg/L Extract	1.02	1.00	102	80 - 120	X929324	22-Jul-19	
EPA 6010D	Copper	mg/L Extract	1.02	1.00	102	80 - 120	X929324	22-Jul-19	
EPA 6010D	Lead	mg/L Extract	0.999	1.00	99.9	80 - 120	X929324	22-Jul-19	
EPA 6010D	Selenium	mg/L Extract	0.968	1.00	96.8	80 - 120	X929324	22-Jul-19	
EPA 6010D	Silver	mg/L Extract	0.0518	0.0500	104	80 - 120	X929324	22-Jul-19	
EPA 7470A	Mercury	mg/L Extract	0.00536	0.00500	107	80 - 120	X929326	22-Jul-19	

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Freeport McMoRan - Chino Mines
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Project Name: Hurley Soils IRA 2019 Level 3
Work Order: **X9G0347**
Reported: 23-Jul-19 11:51

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Percent Solids / Percent Moisture									
Percent Solids	% Solids	%	99.0	99.4	0.4	20	X929224	19-Jul-19	
SPLP Leachates (Metals)									
EPA 7470A	Mercury	mg/L Extract	<0.00020	<0.00020	UDL	20	X929326	22-Jul-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	Copper	mg/kg	116	9.49	100	106	75 - 125	X929228	23-Jul-19	
EPA 6010D	Iron	mg/kg	14600	12100	1000	0.30R>S	75 - 125	X929228	23-Jul-19	M3
EPA 6010D	Lead	mg/kg	112	3.4	100	109	75 - 125	X929228	23-Jul-19	
SPLP Leachates (Metals)										
EPA 6010D	Arsenic	mg/L Extract	1.00	<0.025	1.00	100	75 - 125	X929324	22-Jul-19	
EPA 6010D	Barium	mg/L Extract	1.03	0.0068	1.00	103	75 - 125	X929324	22-Jul-19	
EPA 6010D	Cadmium	mg/L Extract	1.00	<0.0040	1.00	100	75 - 125	X929324	22-Jul-19	
EPA 6010D	Chromium	mg/L Extract	1.05	<0.0060	1.00	105	75 - 125	X929324	22-Jul-19	
EPA 6010D	Copper	mg/L Extract	1.04	<0.0100	1.00	104	75 - 125	X929324	22-Jul-19	
EPA 6010D	Lead	mg/L Extract	0.995	<0.0150	1.00	99.5	75 - 125	X929324	22-Jul-19	
EPA 6010D	Selenium	mg/L Extract	0.980	<0.040	1.00	98.0	75 - 125	X929324	22-Jul-19	
EPA 6010D	Silver	mg/L Extract	0.0518	<0.0100	0.0500	104	75 - 125	X929324	22-Jul-19	
EPA 7470A	Mercury	mg/L Extract	0.00112	<0.00020	0.00100	112	70 - 130	X929326	22-Jul-19	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010D	Copper	mg/kg	112	116	100	102	3.2	20	X929228	23-Jul-19	
EPA 6010D	Iron	mg/kg	13600	14600	1000	0.30R>S	7.4	20	X929228	23-Jul-19	M3
EPA 6010D	Lead	mg/kg	113	112	100	110	0.6	20	X929228	23-Jul-19	
SPLP Leachates (Metals)											
EPA 6010D	Arsenic	mg/L Extract	0.990	1.00	1.00	99.0	1.1	20	X929324	22-Jul-19	
EPA 6010D	Barium	mg/L Extract	1.02	1.03	1.00	101	1.1	20	X929324	22-Jul-19	
EPA 6010D	Cadmium	mg/L Extract	0.981	1.00	1.00	98.1	2.0	20	X929324	22-Jul-19	
EPA 6010D	Chromium	mg/L Extract	1.02	1.05	1.00	102	2.1	20	X929324	22-Jul-19	
EPA 6010D	Copper	mg/L Extract	1.01	1.04	1.00	101	2.2	20	X929324	22-Jul-19	
EPA 6010D	Lead	mg/L Extract	0.980	0.995	1.00	98.0	1.6	20	X929324	22-Jul-19	
EPA 6010D	Selenium	mg/L Extract	0.970	0.980	1.00	97.0	1.1	20	X929324	22-Jul-19	
EPA 6010D	Silver	mg/L Extract	0.0519	0.0518	0.0500	104	0.1	20	X929324	22-Jul-19	
EPA 7470A	Mercury	mg/L Extract	0.00116	0.00112	0.00100	116	3.5	20	X929326	22-Jul-19	

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Freeport McMoRan - Chino Mines	**Project Name: Hurley Soils IRA 2019 Level 3**
PO Box 10	Work Order: **X9G0347**
Bayard, NM 88023	Reported: 23-Jul-19 11:51

Notes and Definitions

M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001 | **Sampling Date** 7/12/2019 | **Date/Time Received** 7/18/201910:18 AM
Client Sample ID SW PEA GRAVEL | **Sampling Time** 1:05 PM | **Extraction Date** 7/18/2019
Matrix Solid | **Sample Location** X9G0347-01
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
4,4-DDE	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
4,4-DDT	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Aldrin	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
alpha-BHC	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
beta-BHC	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Chlordane	ND	mg/Kg	0.05	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
delta-BHC	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Dieldrin	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endosulfan I	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endosulfan II	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endosulfan sulfate	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endrin	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endrin aldehyde	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Endrin ketone	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Heptachlor	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-001	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW PEA GRAVEL	**Sampling Time**	1:05 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-01		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor epoxide	ND	mg/Kg	0.01	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Methoxychlor	ND	mg/Kg	0.05	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
Toxaphene	ND	mg/Kg	0.05	7/19/2019 12:49:00 PM	SAT	EPA 8081A	
%moisture	0.7	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-001

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8081A	89.0	30-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-002	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	BASE COURSE MCCAULEY	**Sampling Time**	1:10 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-02		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
4,4-DDE	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
4,4-DDT	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Aldrin	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
alpha-BHC	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
beta-BHC	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Chlordane	ND	mg/Kg	0.05	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
delta-BHC	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Dieldrin	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endosulfan I	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endosulfan II	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endosulfan sulfate	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endrin	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endrin aldehyde	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Endrin ketone	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Heptachlor	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-002	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	BASE COURSE MCCAULEY	**Sampling Time**	1:10 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-02		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor epoxide	ND	mg/Kg	0.01	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Methoxychlor	ND	mg/Kg	0.05	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
Toxaphene	ND	mg/Kg	0.05	7/19/2019 1:08:00 PM	SAT	EPA 8081A	
%moisture	0.9	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-002

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8081A	89.8	30-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-003	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY RED ROCK	**Sampling Time**	1:15 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
4,4-DDE	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
4,4-DDT	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Aldrin	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
alpha-BHC	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
beta-BHC	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Chlordane	ND	mg/Kg	0.05	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
delta-BHC	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Dieldrin	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endosulfan I	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endosulfan II	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endosulfan sulfate	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endrin	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endrin aldehyde	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Endrin ketone	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Heptachlor	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-003	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY RED ROCK	**Sampling Time**	1:15 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor epoxide	ND	mg/Kg	0.01	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Methoxychlor	ND	mg/Kg	0.05	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
Toxaphene	ND	mg/Kg	0.05	7/19/2019 1:26:00 PM	SAT	EPA 8081A	
%moisture	0	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-003

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8081A	91.6	30-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004 | **Sampling Date** 7/12/2019 | **Date/Time Received** 7/18/201910:18 AM
Client Sample ID MCCAULEY GRAY ROCK | **Sampling Time** 1:20 PM | **Extraction Date** 7/18/2019
Matrix Solid | **Sample Location** X9G0347-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
4,4-DDE	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
4,4-DDT	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Aldrin	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
alpha-BHC	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
beta-BHC	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Chlordane	ND	mg/Kg	0.05	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
delta-BHC	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Dieldrin	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endosulfan I	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endosulfan II	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endosulfan sulfate	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endrin	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endrin aldehyde	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Endrin ketone	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Heptachlor	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-004	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY GRAY ROCK	**Sampling Time**	1:20 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-04		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor epoxide	ND	mg/Kg	0.01	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Methoxychlor	ND	mg/Kg	0.05	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
Toxaphene	ND	mg/Kg	0.05	7/19/2019 1:45:00 PM	SAT	EPA 8081A	
%moisture	0.6	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-004

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8081A	83.4	30-130

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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-005	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW NATIVE SOIL	**Sampling Time**	1:27 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-05		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
4,4-DDE	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
4,4-DDT	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Aldrin	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
alpha-BHC	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
beta-BHC	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Chlordane	ND	mg/Kg	0.05	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
delta-BHC	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Dieldrin	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endosulfan I	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endosulfan II	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endosulfan sulfate	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endrin	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endrin aldehyde	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Endrin ketone	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Heptachlor	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-005	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW NATIVE SOIL	**Sampling Time**	1:27 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-05		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor epoxide	ND	mg/Kg	0.01	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Methoxychlor	ND	mg/Kg	0.05	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
Toxaphene	ND	mg/Kg	0.05	7/19/2019 2:04:00 PM	SAT	EPA 8081A	
%moisture	2.3	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-005

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8081A	90.0	30-130

Authorized Signature

Todd Taruscio, Lab Manager

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

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

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Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Endosulfan II	0.00702	mg/Kg	0.01	70.2	16-117	7/18/2019	7/19/2019
4,4-DDE	0.00808	mg/Kg	0.01	80.8	50-119	7/18/2019	7/19/2019
4,4-DDT	0.00955	mg/Kg	0.01	95.5	40-136	7/18/2019	7/19/2019
Aldrin	0.00824	mg/Kg	0.01	82.4	50-115	7/18/2019	7/19/2019
alpha-BHC	0.00824	mg/Kg	0.01	82.4	54-123	7/18/2019	7/19/2019
beta-BHC	0.00749	mg/Kg	0.01	74.9	50-115	7/18/2019	7/19/2019
delta-BHC	0.00774	mg/Kg	0.01	77.4	42-148	7/18/2019	7/19/2019
4,4-DDD	0.00867	mg/Kg	0.01	86.7	49-126	7/18/2019	7/19/2019
Endosulfan I	0.00809	mg/Kg	0.01	80.9	10-116	7/18/2019	7/19/2019
Methoxychlor	0.00977	mg/Kg	0.01	97.7	41-136	7/18/2019	7/19/2019
Endosulfan sulfate	0.0101	mg/Kg	0.01	101.0	16-164	7/18/2019	7/19/2019
Endrin	0.00895	mg/Kg	0.01	89.5	57-139	7/18/2019	7/19/2019
Endrin aldehyde	0.00653	mg/Kg	0.01	65.3	20-120	7/18/2019	7/19/2019
Endrin ketone	0.00879	mg/Kg	0.01	87.9	34-126	7/18/2019	7/19/2019
gamma-BHC (Lindane)	0.00776	mg/Kg	0.01	77.6	53-121	7/18/2019	7/19/2019
Heptachlor	0.00947	mg/Kg	0.01	94.7	54-124	7/18/2019	7/19/2019
Heptachlor epoxide	0.00845	mg/Kg	0.01	84.5	49-115	7/18/2019	7/19/2019
Dieldrin	0.00862	mg/Kg	0.01	86.2	47-123	7/18/2019	7/19/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-001	Endosulfan II	ND	0.000876	mg/Kg	0.002	43.8	10-121	7/18/2019	7/19/2019
190718009-001	4,4-DDE	ND	0.00166	mg/Kg	0.002	83.0	30-131	7/18/2019	7/19/2019
190718009-001	4,4-DDT	ND	0.00223	mg/Kg	0.002	111.5	28-145	7/18/2019	7/19/2019
190718009-001	Aldrin	ND	0.00189	mg/Kg	0.002	94.5	36-121	7/18/2019	7/19/2019
190718009-001	alpha-BHC	ND	0.00165	mg/Kg	0.002	82.5	49-117	7/18/2019	7/19/2019
190718009-001	beta-BHC	ND	0.00166	mg/Kg	0.002	83.0	28-132	7/18/2019	7/19/2019
190718009-001	delta-BHC	ND	0.00161	mg/Kg	0.002	80.5	35-149	7/18/2019	7/19/2019
190718009-001	4,4-DDD	ND	0.00227	mg/Kg	0.002	113.5	30-148	7/18/2019	7/19/2019
190718009-001	Endosulfan I	ND	0.000663	mg/Kg	0.002	33.2	10-115	7/18/2019	7/19/2019
190718009-001	Methoxychlor	ND	0.00210	mg/Kg	0.002	105.0	42-144	7/18/2019	7/19/2019
190718009-001	Endosulfan sulfate	ND	0.00223	mg/Kg	0.002	111.5	20-154	7/18/2019	7/19/2019
190718009-001	Endrin	ND	0.00191	mg/Kg	0.002	95.5	41-143	7/18/2019	7/19/2019
190718009-001	Endrin aldehyde	ND	0.00149	mg/Kg	0.002	74.5	10-115	7/18/2019	7/19/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-001	Endrin ketone	ND	0.00191	mg/Kg	0.002	95.5	22-136	7/18/2019	7/19/2019
190718009-001	gamma-BHC (Lindane)	ND	0.00162	mg/Kg	0.002	81.0	46-123	7/18/2019	7/19/2019
190718009-001	Heptachlor	ND	0.00197	mg/Kg	0.002	98.5	40-138	7/18/2019	7/19/2019
190718009-001	Heptachlor epoxide	ND	0.00191	mg/Kg	0.002	95.5	43-115	7/18/2019	7/19/2019
190718009-001	Dieldrin	ND	0.00190	mg/Kg	0.002	95.0	33-136	7/18/2019	7/19/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Endosulfan II	0.000586	mg/Kg	0.002	29.3	39.7	0-50	7/18/2019	7/19/2019
4,4-DDE	0.00165	mg/Kg	0.002	82.5	0.6	0-50	7/18/2019	7/19/2019
4,4-DDT	0.00158	mg/Kg	0.002	79.0	34.1	0-50	7/18/2019	7/19/2019
Aldrin	0.00178	mg/Kg	0.002	89.0	6.0	0-50	7/18/2019	7/19/2019
alpha-BHC	0.00170	mg/Kg	0.002	85.0	3.0	0-50	7/18/2019	7/19/2019
beta-BHC	0.00148	mg/Kg	0.002	74.0	11.5	0-50	7/18/2019	7/19/2019
delta-BHC	0.00151	mg/Kg	0.002	75.5	6.4	0-50	7/18/2019	7/19/2019
4,4-DDD	0.00189	mg/Kg	0.002	94.5	18.3	0-50	7/18/2019	7/19/2019
Endosulfan I	0.000608	mg/Kg	0.002	30.4	8.7	0-50	7/18/2019	7/19/2019
Methoxychlor	0.00174	mg/Kg	0.002	87.0	18.8	0-50	7/18/2019	7/19/2019
Endosulfan sulfate	0.00187	mg/Kg	0.002	93.5	17.6	0-50	7/18/2019	7/19/2019
Endrin	0.00171	mg/Kg	0.002	85.5	11.0	0-50	7/18/2019	7/19/2019
Endrin aldehyde	0.00162	mg/Kg	0.002	81.0	8.4	0-50	7/18/2019	7/19/2019
Endrin ketone	0.00170	mg/Kg	0.002	85.0	11.6	0-50	7/18/2019	7/19/2019
gamma-BHC (Lindane)	0.00167	mg/Kg	0.002	83.5	3.0	0-50	7/18/2019	7/19/2019
Heptachlor	0.00183	mg/Kg	0.002	91.5	7.4	0-50	7/18/2019	7/19/2019
Heptachlor epoxide	0.00181	mg/Kg	0.002	90.5	5.4	0-50	7/18/2019	7/19/2019
Dieldrin	0.00169	mg/Kg	0.002	84.5	11.7	0-50	7/18/2019	7/19/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
4,4-DDD	ND	mg/Kg	0.01	7/18/2019	7/19/2019
4,4-DDE	ND	mg/Kg	0.01	7/18/2019	7/19/2019
4,4-DDT	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Aldrin	ND	mg/Kg	0.01	7/18/2019	7/19/2019
alpha-BHC	ND	mg/Kg	0.01	7/18/2019	7/19/2019
beta-BHC	ND	mg/Kg	0.01	7/18/2019	7/19/2019

Comments:

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Chlordane	ND	mg/Kg	0.05	7/18/2019	7/19/2019
delta-BHC	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Dieldrin	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endosulfan I	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endosulfan II	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endosulfan sulfate	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endrin	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endrin aldehyde	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Endrin ketone	ND	mg/Kg	0.01	7/18/2019	7/19/2019
gamma-BHC (Lindane)	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Heptachlor	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Heptachlor epoxide	ND	mg/Kg	0.01	7/18/2019	7/19/2019
Methoxychlor	ND	mg/Kg	0.05	7/18/2019	7/19/2019
Toxaphene	ND	mg/Kg	0.05	7/18/2019	7/19/2019

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-001	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW PEA GRAVEL	**Sampling Time**	1:05 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-01		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
PCB 8082 (total)	ND	mg/kg	0.1	7/19/2019 12:49:00 PM	SAT	EPA 8082	
%moisture	0.7	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-001

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	78.1	30-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-002	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	BASE COURSE MCCAULEY	**Sampling Time**	1:10 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-02		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
PCB 8082 (total)	ND	mg/kg	0.1	7/19/2019 1:08:00 PM	SAT	EPA 8082	
%moisture	0.9	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-002

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	80.7	30-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-003	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY RED ROCK	**Sampling Time**	1:15 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
PCB 8082 (total)	ND	mg/kg	0.1	7/19/2019 1:26:00 PM	SAT	EPA 8082	
%moisture	0	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-003

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	88.2	30-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-004	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY GRAY ROCK	**Sampling Time**	1:20 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-04		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
PCB 8082 (total)	ND	mg/kg	0.1	7/19/2019 1:45:00 PM	SAT	EPA 8082	
%moisture	0.6	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-004

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	81.4	30-150

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Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-005	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW NATIVE SOIL	**Sampling Time**	1:27 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-05		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
PCB 8082 (total)	ND	mg/kg	0.1	7/19/2019 2:04:00 PM	SAT	EPA 8082	
%moisture	2.3	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-005

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	80.3	30-150

Authorized Signature

Todd Taruscio, Lab Manager

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

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
PCB 8082 (total)	0.163	mg/kg	0.2	81.5	53-141	7/18/2019	7/19/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-002	PCB 8082 (total)	ND	0.0865	mg/kg	0.1	86.5	50-138	7/18/2019	7/19/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
PCB 8082 (total)	0.0908	mg/kg	0.1	90.8	4.9	0-50	7/18/2019	7/19/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Aroclor 1016 (PCB-1016)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1221 (PCB-1221)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1232 (PCB-1232)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1242 (PCB-1242)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1248 (PCB-1248)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1254 (PCB-1254)	ND	mg/kg	0.1	7/18/2019	7/19/2019
Aroclor 1260 (PCB-1260)	ND	mg/kg	0.1	7/18/2019	7/19/2019
PCB 8082 (total)	ND	mg/kg	0.1	7/18/2019	7/19/2019

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001
Client Sample ID SW PEA GRAVEL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:05 PM
Sample Location X9G0347-01

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
1-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4-Dichlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4-Dimethylphenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4-Dinitrophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Chloronaphthalene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Chlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Methylphenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Nitroaniline	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
2-Nitrophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
3+4-Methylphenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
3-Nitroaniline	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Chloroaniline	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Nitroaniline	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
4-Nitrophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Acenaphthene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Acenaphthylene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Aniline	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001
Client Sample ID SW PEA GRAVEL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:05 PM
Sample Location X9G0347-01

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Anthracene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzidine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzo(ghi)perylene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Benzyl alcohol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Butylbenzylphthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Carbazole	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Chrysene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Dibenzofuran	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Diethylphthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Dimethylphthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Di-n-butylphthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Di-n-octylphthalate	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Fluoranthene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Fluorene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Hexachlorobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Hexachlorobutadiene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Hexachloroethane	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Isophorone	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Naphthalene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Nitrobenzene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Nitrosodimethylamine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Pentachlorophenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	M2, R13

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-001	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW PEA GRAVEL	**Sampling Time**	1:05 PM	**Extraction Date**	7/19/2019
Matrix	Solid	**Sample Location**	X9G0347-01		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenanthrene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Phenol	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Pyrene	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
Pyridine	ND	mg/kg	0.05	7/22/2019 11:39:00 AM	TGT	EPA 8270D	
%moisture	0.7	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-001

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 8270D	76.0	42-121
2-Fluorobiphenyl	EPA 8270D	92.0	44-127
2-Fluorophenol	EPA 8270D	90.4	33-119
Nitrobenzene-d5	EPA 8270D	84.8	30-124
Phenol-d5	EPA 8270D	84.4	34-130
Terphenyl-d14	EPA 8270D	142.4	34-145

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-002 | **Sampling Date** 7/12/2019 | **Date/Time Received** 7/18/201910:18 AM
Client Sample ID BASE COURSE MCCAULEY | **Sampling Time** 1:10 PM | **Extraction Date** 7/19/2019
Matrix Solid | **Sample Location** X9G0347-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
1-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4-Dichlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4-Dimethylphenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4-Dinitrophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Chloronaphthalene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Chlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Methylphenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
2-Nitrophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
3+4-Methylphenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
3-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Chloroaniline	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
4-Nitrophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Acenaphthene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Acenaphthylene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Aniline	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Anthracene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-002 **Sampling Date** 7/12/2019 **Date/Time Received** 7/18/201910:18 AM
Client Sample ID BASE COURSE MCCAULEY **Sampling Time** 1:10 PM **Extraction Date** 7/19/2019
Matrix Solid **Sample Location** X9G0347-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzo(ghi)perylene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Benzyl alcohol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Butylbenzylphthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Carbazole	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Chrysene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Dibenzofuran	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Diethylphthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Dimethylphthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Di-n-butylphthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Di-n-octylphthalate	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Fluoranthene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Fluorene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Hexachlorobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Hexachlorobutadiene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Hexachloroethane	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Isophorone	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Naphthalene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Nitrobenzene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Nitrosodimethylamine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Pentachlorophenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	M2, R13
Phenanthrene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-002	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	BASE COURSE MCCAULEY	**Sampling Time**	1:10 PM	**Extraction Date**	7/19/2019
Matrix	Solid	**Sample Location**	X9G0347-02		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenol	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Pyrene	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
Pyridine	ND	mg/kg	0.05	7/22/2019 12:07:00 PM	TGT	EPA 8270D	
%moisture	0.9	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-002

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 8270D	87.0	42-121
2-Fluorobiphenyl	EPA 8270D	92.0	44-127
2-Fluorophenol	EPA 8270D	90.2	33-119
Nitrobenzene-d5	EPA 8270D	82.4	30-124
Phenol-d5	EPA 8270D	86.6	34-130
Terphenyl-d14	EPA 8270D	136.8	34-145

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-003
Client Sample ID MCCAULEY RED ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:15 PM
Sample Location X9G0347-03

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
1-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4-Dichlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4-Dimethylphenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4-Dinitrophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Chloronaphthalene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Chlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Methylphenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
2-Nitrophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
3+4-Methylphenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
3-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Chloroaniline	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Nitroaniline	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
4-Nitrophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Acenaphthene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Acenaphthylene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Aniline	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Anthracene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-003
Client Sample ID MCCAULEY RED ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:15 PM
Sample Location X9G0347-03

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzo(ghi)perylene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Benzyl alcohol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Butylbenzylphthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Carbazole	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Chrysene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Dibenzofuran	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Diethylphthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Dimethylphthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Di-n-butylphthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Di-n-octylphthalate	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Fluoranthene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Fluorene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Hexachlorobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Hexachlorobutadiene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Hexachloroethane	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Isophorone	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Naphthalene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Nitrobenzene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Nitrosodimethylamine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Pentachlorophenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	M2, R13
Phenanthrene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-003	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY RED ROCK	**Sampling Time**	1:15 PM	**Extraction Date**	7/19/2019
Matrix	Solid	**Sample Location**	X9G0347-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenol	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Pyrene	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
Pyridine	ND	mg/kg	0.05	7/22/2019 12:35:00 PM	TGT	EPA 8270D	
%moisture	0	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-003

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 8270D	65.8	42-121
2-Fluorobiphenyl	EPA 8270D	75.2	44-127
2-Fluorophenol	EPA 8270D	74.4	33-119
Nitrobenzene-d5	EPA 8270D	68.0	30-124
Phenol-d5	EPA 8270D	71.8	34-130
Terphenyl-d14	EPA 8270D	131.6	34-145

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004
Client Sample ID MCCAULEY GRAY ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:20 PM
Sample Location X9G0347-04

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
1-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4-Dichlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4-Dimethylphenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4-Dinitrophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Chloronaphthalene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Chlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Methylphenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
2-Nitrophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
3+4-Methylphenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
3-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Chloroaniline	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
4-Nitrophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Acenaphthene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Acenaphthylene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Aniline	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Anthracene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004 | **Sampling Date** 7/12/2019 | **Date/Time Received** 7/18/201910:18 AM
Client Sample ID MCCAULEY GRAY ROCK | **Sampling Time** 1:20 PM | **Extraction Date** 7/19/2019
Matrix Solid | **Sample Location** X9G0347-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzo(ghi)perylene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Benzyl alcohol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Butylbenzylphthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Carbazole	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Chrysene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Dibenzofuran	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Diethylphthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Dimethylphthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Di-n-butylphthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Di-n-octylphthalate	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Fluoranthene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Fluorene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Hexachlorobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Hexachlorobutadiene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Hexachloroethane	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Isophorone	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Naphthalene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Nitrobenzene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Nitrosodimethylamine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Pentachlorophenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	M2, R13
Phenanthrene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-004	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY GRAY ROCK	**Sampling Time**	1:20 PM	**Extraction Date**	7/19/2019
Matrix	Solid	**Sample Location**	X9G0347-04		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenol	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Pyrene	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
Pyridine	ND	mg/kg	0.05	7/22/2019 1:03:00 PM	TGT	EPA 8270D	
%moisture	0.6	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-004

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 8270D	65.4	42-121
2-Fluorobiphenyl	EPA 8270D	92.0	44-127
2-Fluorophenol	EPA 8270D	87.4	33-119
Nitrobenzene-d5	EPA 8270D	81.6	30-124
Phenol-d5	EPA 8270D	80.4	34-130
Terphenyl-d14	EPA 8270D	121.6	34-145

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-005
Client Sample ID SW NATIVE SOIL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:27 PM
Sample Location X9G0347-05

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
1-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4-Dichlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4-Dimethylphenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4-Dinitrophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Chloronaphthalene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Chlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Methylphenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
2-Nitrophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
3+4-Methylphenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
3-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Chloroaniline	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Nitroaniline	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
4-Nitrophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Acenaphthene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Acenaphthylene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Aniline	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Anthracene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-005
Client Sample ID SW NATIVE SOIL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:27 PM
Sample Location X9G0347-05

Date/Time Received 7/18/201910:18 AM
Extraction Date 7/19/2019

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzo(ghi)perylene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Benzyl alcohol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Butylbenzylphthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Carbazole	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Chrysene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Dibenzofuran	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Diethylphthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Dimethylphthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Di-n-butylphthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Di-n-octylphthalate	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Fluoranthene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Fluorene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Hexachlorobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Hexachlorobutadiene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Hexachloroethane	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Isophorone	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Naphthalene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Nitrobenzene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Nitrosodimethylamine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Pentachlorophenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	M2, R13
Phenanthrene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-005	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW NATIVE SOIL	**Sampling Time**	1:27 PM	**Extraction Date**	7/19/2019
Matrix	Solid	**Sample Location**	X9G0347-05		
Comments					

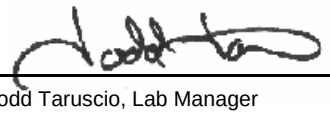
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenol	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Pyrene	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
Pyridine	ND	mg/kg	0.05	7/22/2019 1:32:00 PM	TGT	EPA 8270D	
%moisture	2.3	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-005

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 8270D	75.6	42-121
2-Fluorobiphenyl	EPA 8270D	80.4	44-127
2-Fluorophenol	EPA 8270D	78.0	33-119
Nitrobenzene-d5	EPA 8270D	71.2	30-124
Phenol-d5	EPA 8270D	73.4	34-130
Terphenyl-d14	EPA 8270D	93.2	34-145

Authorized Signature



Todd Taruscio, Lab Manager

M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit
R13	Matrix spike recovery was above method acceptance limits; the associated blank spike recovery and matrix spike duplicate recovery were acceptable.

The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Pyrene	1.32	mg/kg	1	132.0	49-145	7/19/2019	7/22/2019
Phenol	0.89	mg/kg	1	89.0	20-122	7/19/2019	7/22/2019
Pentachlorophenol	1.04	mg/kg	1	104.0	4-128	7/19/2019	7/22/2019
n-Nitroso-di-n-propylamine	0.95	mg/kg	1	95.0	41-151	7/19/2019	7/22/2019
bis(2-Ethylhexyl)phthalate	1.38	mg/kg	1	138.0	38-147	7/19/2019	7/22/2019
Acenaphthene	0.97	mg/kg	1	97.0	52-143	7/19/2019	7/22/2019
4-Nitrophenol	1.08	mg/kg	1	108.0	30-122	7/19/2019	7/22/2019
4-Chloro-3-methylphenol	1.14	mg/kg	1	114.0	37-135	7/19/2019	7/22/2019
2-Chlorophenol	0.93	mg/kg	1	93.0	27-121	7/19/2019	7/22/2019
2,4-Dinitrotoluene	0.99	mg/kg	1	99.0	30-138	7/19/2019	7/22/2019
1,4-Dichlorobenzene	0.75	mg/kg	1	75.0	13-140	7/19/2019	7/22/2019
1,2,4-Trichlorobenzene	0.91	mg/kg	1	91.0	41-136	7/19/2019	7/22/2019

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Pyrene	1.33	mg/kg	1	133.0	0.8	0-25	7/19/2019	7/22/2019
Phenol	0.92	mg/kg	1	92.0	3.3	0-23	7/19/2019	7/22/2019
Pentachlorophenol	1.28	mg/kg	1	128.0	20.7	0-46	7/19/2019	7/22/2019
n-Nitroso-di-n-propylamine	0.94	mg/kg	1	94.0	1.1	0-24	7/19/2019	7/22/2019
bis(2-Ethylhexyl)phthalate	1.33	mg/kg	1	133.0	3.7	0-25	7/19/2019	7/22/2019
Acenaphthene	0.99	mg/kg	1	99.0	2.0	0-23	7/19/2019	7/22/2019
4-Nitrophenol	0.91	mg/kg	1	91.0	17.1	0-34	7/19/2019	7/22/2019
4-Chloro-3-methylphenol	1.08	mg/kg	1	108.0	5.4	0-20	7/19/2019	7/22/2019
2-Chlorophenol	0.94	mg/kg	1	94.0	1.1	0-24	7/19/2019	7/22/2019
2,4-Dinitrotoluene	1.00	mg/kg	1	100.0	1.0	0-22	7/19/2019	7/22/2019
1,4-Dichlorobenzene	0.65	mg/kg	1	65.0	14.3	0-30	7/19/2019	7/22/2019
1,2,4-Trichlorobenzene	0.86	mg/kg	1	86.0	5.6	0-24	7/19/2019	7/22/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-002	Pyrene	ND	1.06	mg/kg	1	106.0	49-145	7/19/2019	7/22/2019
190718009-002	Phenol	ND	0.75	mg/kg	1	75.0	15-122	7/19/2019	7/22/2019
190718009-002	Pentachlorophenol	ND	0.17	mg/kg	1	17.0	4-128	7/19/2019	7/22/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-002	n-Nitroso-di-n-propylamine	ND	0.80	mg/kg	1	80.0	41-151	7/19/2019	7/22/2019
190718009-002	bis(2-Ethylhexyl)phthalate	ND	1.19	mg/kg	1	119.0	38-147	7/19/2019	7/22/2019
190718009-002	Acenaphthene	ND	0.85	mg/kg	1	85.0	52-143	7/19/2019	7/22/2019
190718009-002	4-Nitrophenol	ND	0.82	mg/kg	1	82.0	30-122	7/19/2019	7/22/2019
190718009-002	4-Chloro-3-methylphenol	ND	1.03	mg/kg	1	103.0	17-132	7/19/2019	7/22/2019
190718009-002	2-Chlorophenol	ND	0.75	mg/kg	1	75.0	27-121	7/19/2019	7/22/2019
190718009-002	2,4-Dinitrotoluene	ND	0.87	mg/kg	1	87.0	30-138	7/19/2019	7/22/2019
190718009-002	1,4-Dichlorobenzene	ND	0.53	mg/kg	1	53.0	13-140	7/19/2019	7/22/2019
190718009-002	1,2,4-Trichlorobenzene	ND	0.67	mg/kg	1	67.0	41-136	7/19/2019	7/22/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Pyrene	1.36	mg/kg	1	136.0	24.8	0-25	7/19/2019	7/22/2019
Phenol	0.83	mg/kg	1	83.0	10.1	0-23	7/19/2019	7/22/2019
Pentachlorophenol	0.04	mg/kg	1	4.0	123.8	0-46	7/19/2019	7/22/2019
n-Nitroso-di-n-propylamine	0.89	mg/kg	1	89.0	10.7	0-24	7/19/2019	7/22/2019
bis(2-Ethylhexyl)phthalate	1.39	mg/kg	1	139.0	15.5	0-25	7/19/2019	7/22/2019
Acenaphthene	0.93	mg/kg	1	93.0	9.0	0-23	7/19/2019	7/22/2019
4-Nitrophenol	0.87	mg/kg	1	87.0	5.9	0-34	7/19/2019	7/22/2019
4-Chloro-3-methylphenol	1.13	mg/kg	1	113.0	9.3	0-20	7/19/2019	7/22/2019
2-Chlorophenol	0.84	mg/kg	1	84.0	11.3	0-24	7/19/2019	7/22/2019
2,4-Dinitrotoluene	0.93	mg/kg	1	93.0	6.7	0-22	7/19/2019	7/22/2019
1,4-Dichlorobenzene	0.68	mg/kg	1	68.0	24.8	0-30	7/19/2019	7/22/2019
1,2,4-Trichlorobenzene	0.81	mg/kg	1	81.0	18.9	0-24	7/19/2019	7/22/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,2,4-Trichlorobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
1,2-Dichlorobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
1,2-Diphenyl hydrazine	ND	mg/kg	0.05	7/19/2019	7/22/2019
1,3-Dichlorobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
1,4-Dichlorobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
1-Methylnaphthalene	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,3,4,6-Tetrachlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,3,5,6-Tetrachlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
2,4,5-Trichlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,4,6-Trichlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,4-Dichlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,4-Dimethylphenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,4-Dinitrophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,4-Dinitrotoluene	ND	mg/kg	0.05	7/19/2019	7/22/2019
2,6-Dinitrotoluene	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Chloronaphthalene	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Chlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Methylnaphthalene	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Methylphenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Nitroaniline	ND	mg/kg	0.05	7/19/2019	7/22/2019
2-Nitrophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
3,3'-Dichlorobenzidine	ND	mg/kg	0.05	7/19/2019	7/22/2019
3+4-Methylphenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
3-Nitroaniline	ND	mg/kg	0.05	7/19/2019	7/22/2019
4,6-Dinitro-2-methylphenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Bromophenyl-phenylether	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Chloro-3-methylphenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Chloroaniline	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Chlorophenyl-phenylether	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Nitroaniline	ND	mg/kg	0.05	7/19/2019	7/22/2019
4-Nitrophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
Acenaphthene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Acenaphthylene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Aniline	ND	mg/kg	0.05	7/19/2019	7/22/2019
Anthracene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzidine	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzo(ghi)perylene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzo[a]anthracene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzo[a]pyrene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzo[b]fluoranthene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzo[k]fluoranthene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Benzyl alcohol	ND	mg/kg	0.05	7/19/2019	7/22/2019
bis(2-Chloroethoxy)methane	ND	mg/kg	0.05	7/19/2019	7/22/2019
bis(2-Chloroethyl)ether	ND	mg/kg	0.05	7/19/2019	7/22/2019
bis(2-chloroisopropyl)ether	ND	mg/kg	0.05	7/19/2019	7/22/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
bis(2-Ethylhexyl)phthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Butylbenzylphthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Carbazole	ND	mg/kg	0.05	7/19/2019	7/22/2019
Chrysene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Dibenz[a,h]anthracene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Dibenzofuran	ND	mg/kg	0.05	7/19/2019	7/22/2019
Diethylphthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Dimethylphthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Di-n-butylphthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Di-n-octylphthalate	ND	mg/kg	0.05	7/19/2019	7/22/2019
Fluoranthene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Fluorene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Hexachlorobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Hexachlorobutadiene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Hexachlorocyclopentadiene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Hexachloroethane	ND	mg/kg	0.05	7/19/2019	7/22/2019
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Isophorone	ND	mg/kg	0.05	7/19/2019	7/22/2019
Naphthalene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Nitrobenzene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Nitrosodimethylamine	ND	mg/kg	0.05	7/19/2019	7/22/2019
n-Nitroso-di-n-propylamine	ND	mg/kg	0.05	7/19/2019	7/22/2019
n-Nitrosodiphenylamine	ND	mg/kg	0.05	7/19/2019	7/22/2019
Pentachlorophenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
Phenanthrene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Phenol	ND	mg/kg	0.05	7/19/2019	7/22/2019
Pyrene	ND	mg/kg	0.05	7/19/2019	7/22/2019
Pyridine	ND	mg/kg	0.05	7/19/2019	7/22/2019

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-001	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW PEA GRAVEL	**Sampling Time**	1:05 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-01		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	7/19/2019 1:12:00 PM	RPR	EPA 8015D	
Lube Oil	ND	mg/kg	100	7/19/2019 1:12:00 PM	RPR	EPA 8015D	
%moisture	0.7	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-001

Surrogate Standard	Method	Percent Recovery	Control Limits
Hexacosane	EPA 8015D	80.0	50-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-002	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	BASE COURSE MCCAULEY	**Sampling Time**	1:10 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-02		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	7/19/2019 1:46:00 PM	RPR	EPA 8015D	
Lube Oil	ND	mg/kg	100	7/19/2019 1:46:00 PM	RPR	EPA 8015D	
%moisture	0.9	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-002

Surrogate Standard	Method	Percent Recovery	Control Limits
Hexacosane	EPA 8015D	82.4	50-150

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Address: PO BOX 10
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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-003	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY RED ROCK	**Sampling Time**	1:15 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	7/19/2019 2:21:00 PM	RPR	EPA 8015D	
Lube Oil	ND	mg/kg	100	7/19/2019 2:21:00 PM	RPR	EPA 8015D	
%moisture	0	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-003

Surrogate Standard	Method	Percent Recovery	Control Limits
Hexacosane	EPA 8015D	81.2	50-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-004	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	MCCAULEY GRAY ROCK	**Sampling Time**	1:20 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-04		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	7/19/2019 4:03:00 PM	RPR	EPA 8015D	
Lube Oil	ND	mg/kg	100	7/19/2019 4:03:00 PM	RPR	EPA 8015D	
%moisture	0.6	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-004

Surrogate Standard	Method	Percent Recovery	Control Limits
Hexacosane	EPA 8015D	77.8	50-150

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number	190718009-005	**Sampling Date**	7/12/2019	**Date/Time Received**	7/18/201910:18 AM
Client Sample ID	SW NATIVE SOIL	**Sampling Time**	1:27 PM	**Extraction Date**	7/18/2019
Matrix	Solid	**Sample Location**	X9G0347-05		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	7/19/2019 4:37:00 PM	RPR	EPA 8015D	
Lube Oil	ND	mg/kg	100	7/19/2019 4:37:00 PM	RPR	EPA 8015D	
%moisture	2.3	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-005

Surrogate Standard	Method	Percent Recovery	Control Limits
Hexacosane	EPA 8015D	68.6	50-150

Authorized Signature

Todd Taruscio, Lab Manager

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

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

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Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Diesel	69.9	mg/kg	100	69.9	50-150	7/18/2019	7/18/2019

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Diesel	75.3	mg/kg	100	75.3	7.4	0-25	7/18/2019	7/18/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-003	Diesel	ND	77.0	mg/kg	100	77.0	50-150	7/18/2019	7/18/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Diesel	ND	mg/kg	25	7/18/2019	7/18/2019
Lube Oil	ND	mg/kg	100	7/18/2019	7/18/2019

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001
Client Sample ID SW PEA GRAVEL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:05 PM
Sample Location X9G0347-01

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
2-hexanone	ND	mg/Kg	0.025	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Acetone	ND	mg/Kg	0.025	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Benzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001
Client Sample ID SW PEA GRAVEL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:05 PM
Sample Location X9G0347-01

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Bromoform	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Bromomethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Chloroethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Chloroform	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Chloromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Dibromomethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Methylene chloride	ND	mg/Kg	0.025	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Naphthalene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
o-Xylene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	

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Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-001
Client Sample ID SW PEA GRAVEL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:05 PM
Sample Location X9G0347-01

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Styrene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Toluene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Trichloroethene	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019 3:19:00 PM	SAT	EPA 8260C	
%moisture	0.7	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-001

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	105.6	70-130
4-Bromofluorobenzene	EPA 8260C	90.8	70-130
Toluene-d8	EPA 8260C	106.0	70-130

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Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-002 **Sampling Date** 7/12/2019 **Date/Time Received** 7/18/201910:18 AM
Client Sample ID BASE COURSE MCCAULEY **Sampling Time** 1:10 PM
Matrix Solid **Sample Location** X9G0347-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
2-hexanone	ND	mg/Kg	0.025	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Acetone	ND	mg/Kg	0.025	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Benzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Bromobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-002 **Sampling Date** 7/12/2019 **Date/Time Received** 7/18/201910:18 AM
Client Sample ID BASE COURSE MCCAULEY **Sampling Time** 1:10 PM
Matrix Solid **Sample Location** X9G0347-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Bromoform	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Bromomethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Chloroethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Chloroform	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Chloromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Dibromomethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Methylene chloride	ND	mg/Kg	0.025	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Naphthalene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
o-Xylene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-002
Client Sample ID BASE COURSE MCCAULEY
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:10 PM
Sample Location X9G0347-02

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Styrene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Toluene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Trichloroethene	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019 3:48:00 PM	SAT	EPA 8260C	
%moisture	0.9	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	105.2	70-130
4-Bromofluorobenzene	EPA 8260C	89.2	70-130
Toluene-d8	EPA 8260C	111.6	70-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-003
Client Sample ID MCCAULEY RED ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:15 PM
Sample Location X9G0347-03

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
2-hexanone	ND	mg/Kg	0.025	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Acetone	ND	mg/Kg	0.025	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Benzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Bromobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-003
Client Sample ID MCCAULEY RED ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:15 PM
Sample Location X9G0347-03

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Bromoform	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Bromomethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Chloroethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Chloroform	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Chloromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Dibromomethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Methylene chloride	ND	mg/Kg	0.025	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Naphthalene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
o-Xylene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-003
Client Sample ID MCCAULEY RED ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:15 PM
Sample Location X9G0347-03

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Styrene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Toluene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Trichloroethene	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019 4:18:00 PM	SAT	EPA 8260C	
%moisture	0	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-003

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	106.4	70-130
4-Bromofluorobenzene	EPA 8260C	92.0	70-130
Toluene-d8	EPA 8260C	108.8	70-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004 **Sampling Date** 7/12/2019 **Date/Time Received** 7/18/201910:18 AM
Client Sample ID MCCAULEY GRAY ROCK **Sampling Time** 1:20 PM
Matrix Solid **Sample Location** X9G0347-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
2-hexanone	ND	mg/Kg	0.025	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Acetone	ND	mg/Kg	0.025	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Benzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Bromobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004 **Sampling Date** 7/12/2019 **Date/Time Received** 7/18/201910:18 AM
Client Sample ID MCCAULEY GRAY ROCK **Sampling Time** 1:20 PM
Matrix Solid **Sample Location** X9G0347-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Bromoform	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Bromomethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Chloroethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Chloroform	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Chloromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Dibromomethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Methylene chloride	ND	mg/Kg	0.025	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Naphthalene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
o-Xylene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-004
Client Sample ID MCCAULEY GRAY ROCK
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:20 PM
Sample Location X9G0347-04

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Styrene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Toluene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Trichloroethene	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019 4:48:00 PM	SAT	EPA 8260C	
%moisture	0.6	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-004

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	106.0	70-130
4-Bromofluorobenzene	EPA 8260C	89.2	70-130
Toluene-d8	EPA 8260C	108.4	70-130

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-005
Client Sample ID SW NATIVE SOIL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:27 PM
Sample Location X9G0347-05

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
2-hexanone	ND	mg/Kg	0.025	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Acetone	0.216	mg/Kg	0.025	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Benzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Bromobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-005
Client Sample ID SW NATIVE SOIL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:27 PM
Sample Location X9G0347-05

Date/Time Received 7/18/201910:18 AM

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Bromoform	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Bromomethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Chloroethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Chloroform	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Chloromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Dibromomethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Methylene chloride	ND	mg/Kg	0.025	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Naphthalene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
o-Xylene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Sample Number 190718009-005
Client Sample ID SW NATIVE SOIL
Matrix Solid
Comments

Sampling Date 7/12/2019
Sampling Time 1:27 PM
Sample Location X9G0347-05

Date/Time Received 7/18/201910:18 AM

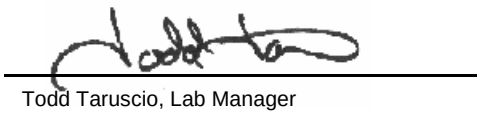
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Styrene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Toluene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Trichloroethene	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019 5:17:00 PM	SAT	EPA 8260C	
%moisture	2.3	Percent		7/19/2019 1:00:00 PM	SAT	%moisture	

Surrogate Data

Sample Number 190718009-005

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	105.2	70-130
4-Bromofluorobenzene	EPA 8260C	91.6	70-130
Toluene-d8	EPA 8260C	106.8	70-130

Authorized Signature



Todd Taruscio, Lab Manager

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

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Trichloroethene	0.00989	mg/kg	0.01	98.9	80-120	7/19/2019	7/19/2019
Toluene	0.0101	mg/kg	0.01	101.0	80-120	7/19/2019	7/19/2019
Tetrachloroethene	0.00927	mg/kg	0.01	92.7	80-120	7/19/2019	7/19/2019
o-Xylene	0.0106	mg/kg	0.01	106.0	80-120	7/19/2019	7/19/2019
Ethylbenzene	0.0107	mg/kg	0.01	107.0	80-120	7/19/2019	7/19/2019
Chlorobenzene	0.00971	mg/kg	0.01	97.1	80-120	7/19/2019	7/19/2019
Benzene	0.00983	mg/kg	0.01	98.3	80-120	7/19/2019	7/19/2019
1,1-Dichloroethene	0.0106	mg/kg	0.01	106.0	80-120	7/19/2019	7/19/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190718009-001	Trichloroethene	ND	0.119	mg/kg	0.127	93.7	70-130	7/19/2019	7/19/2019
190718009-001	Toluene	ND	0.124	mg/kg	0.127	97.6	70-130	7/19/2019	7/19/2019
190718009-001	Tetrachloroethene	ND	0.116	mg/kg	0.127	91.3	70-130	7/19/2019	7/19/2019
190718009-001	o-Xylene	ND	0.112	mg/kg	0.127	88.2	70-130	7/19/2019	7/19/2019
190718009-001	Ethylbenzene	ND	0.121	mg/kg	0.127	95.3	70-130	7/19/2019	7/19/2019
190718009-001	Chlorobenzene	ND	0.119	mg/kg	0.127	93.7	70-130	7/19/2019	7/19/2019
190718009-001	Benzene	ND	0.123	mg/kg	0.127	96.9	70-130	7/19/2019	7/19/2019
190718009-001	1,1-Dichloroethene	ND	0.137	mg/kg	0.127	107.9	70-130	7/19/2019	7/19/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Trichloroethene	0.118	mg/kg	0.127	92.9	0.8	0-25	7/19/2019	7/19/2019
Toluene	0.123	mg/kg	0.127	96.9	0.8	0-25	7/19/2019	7/19/2019
Tetrachloroethene	0.112	mg/kg	0.127	88.2	3.5	0-25	7/19/2019	7/19/2019
o-Xylene	0.110	mg/kg	0.127	86.6	1.8	0-25	7/19/2019	7/19/2019
Ethylbenzene	0.117	mg/kg	0.127	92.1	3.4	0-25	7/19/2019	7/19/2019
Chlorobenzene	0.118	mg/kg	0.127	92.9	0.8	0-25	7/19/2019	7/19/2019
Benzene	0.119	mg/kg	0.127	93.7	3.3	0-25	7/19/2019	7/19/2019
1,1-Dichloroethene	0.139	mg/kg	0.127	109.4	1.4	0-25	7/19/2019	7/19/2019

Comments:

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Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1,1-Trichloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1,2-Trichloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1-Dichloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1-Dichloroethene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,1-dichloropropene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2,3-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2,3-Trichloropropane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2,4-Trichlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2-Dibromo-3-chloropropane(DBCP)	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2-Dibromoethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2-Dichloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,3-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,3-Dichloropropane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
1,4-Dichlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
2,2-Dichloropropane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
2-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
2-hexanone	ND	mg/Kg	0.025	7/19/2019	7/19/2019
4-Chlorotoluene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Acetone	ND	mg/Kg	0.025	7/19/2019	7/19/2019
Acrylonitrile	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Benzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Bromobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Bromochloromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Bromodichloromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Bromoform	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Bromomethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Carbon disulfide	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Carbon Tetrachloride	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Chlorobenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: FREEPORT MCMORAN - CHINO MINES
Address: PO BOX 10
BAYARD, NM 88023
Attn: SVL ANALYTICAL, INC.

Batch #: 190718009
Project Name: SVL #X9G0347

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Chloroethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Chloroform	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Chloromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
cis-1,2-dichloroethene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
cis-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Dibromochloromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Dibromomethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Dichlorodifluoromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Ethylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Hexachlorobutadiene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Isopropylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
m+p-Xylene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Methyl ethyl ketone (MEK)	ND	mg/Kg	0.025	7/19/2019	7/19/2019
Methyl isobutyl ketone (MIBK)	ND	mg/Kg	0.025	7/19/2019	7/19/2019
Methylene chloride	ND	mg/Kg	0.025	7/19/2019	7/19/2019
methyl-t-butyl ether (MTBE)	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Naphthalene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
n-Butylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
n-Propylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
o-Xylene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
p-isopropyltoluene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
sec-Butylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Styrene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
tert-Butylbenzene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Tetrachloroethene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Toluene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
trans-1,2-Dichloroethene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
trans-1,3-Dichloropropene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Trichloroethene	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Trichloroflouromethane	ND	mg/Kg	0.005	7/19/2019	7/19/2019
Vinyl Chloride	ND	mg/Kg	0.005	7/19/2019	7/19/2019

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Login Report

Customer Name: FREEPORT MCMORAN - CHINO MINES
PO BOX 10
BAYARD NM 88023

Order ID: 190718009
Order Date: 7/18/2019

Contact Name: SVL ANALYTICAL, INC.

Project Name: SVL #X9G0347

Comment:

Sample #: 190718009-001 **Customer Sample #:** SW PEA GRAVEL

Recv'd: ☑ **Matrix:** Solid **Collector:** **Date Collected:** 7/12/2019
Quantity: 1 **Date Received:** 7/18/2019 10:18:00 AM **Time Collected:** 1:05 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	7/23/2019	***3 Days***
OC PEST 8081A	M	EPA 8081A	7/23/2019	***3 Days***
PCB 8082	M	EPA 8082	7/23/2019	***3 Days***
SVOC 8270D MOSC	M	EPA 8270D	7/23/2019	***3 Days***
TPHDX MOSC	M	EPA 8015D	7/23/2019	***3 Days***
VOC 8260 MOSC	M	EPA 8260C	7/23/2019	***3 Days***

Sample #: 190718009-002 **Customer Sample #:** BASE COURSE MCCAULEY

Recv'd: ☑ **Matrix:** Solid **Collector:** **Date Collected:** 7/12/2019
Quantity: 1 **Date Received:** 7/18/2019 10:18:00 AM **Time Collected:** 1:10 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	7/23/2019	***3 Days***
OC PEST 8081A	M	EPA 8081A	7/23/2019	***3 Days***
PCB 8082	M	EPA 8082	7/23/2019	***3 Days***
SVOC 8270D MOSC	M	EPA 8270D	7/23/2019	***3 Days***
TPHDX MOSC	M	EPA 8015D	7/23/2019	***3 Days***
VOC 8260 MOSC	M	EPA 8260C	7/23/2019	***3 Days***

Customer Name: FREEPORT MCMORAN - CHINO MINES
PO BOX 10
BAYARD NM 88023

Order ID: 190718009
Order Date: 7/18/2019

Contact Name: SVL ANALYTICAL, INC.

Project Name: SVL #X9G0347

Comment:

Sample #: 190718009-003 **Customer Sample #:** MCCAULEY RED ROCK

Recv'd: ☑ **Matrix:** Solid **Collector:** **Date Collected:** 7/12/2019
Quantity: 1 **Date Received:** 7/18/2019 10:18:00 AM **Time Collected:** 1:15 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	7/23/2019	***3 Days***
OC PEST 8081A	M	EPA 8081A	7/23/2019	***3 Days***
PCB 8082	M	EPA 8082	7/23/2019	***3 Days***
SVOC 8270D MOSC	M	EPA 8270D	7/23/2019	***3 Days***
TPHDX MOSC	M	EPA 8015D	7/23/2019	***3 Days***
VOC 8260 MOSC	M	EPA 8260C	7/23/2019	***3 Days***

Sample #: 190718009-004 **Customer Sample #:** MCCAULEY GRAY ROCK

Recv'd: ☑ **Matrix:** Solid **Collector:** **Date Collected:** 7/12/2019
Quantity: 1 **Date Received:** 7/18/2019 10:18:00 AM **Time Collected:** 1:20 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	7/23/2019	***3 Days***
OC PEST 8081A	M	EPA 8081A	7/23/2019	***3 Days***
PCB 8082	M	EPA 8082	7/23/2019	***3 Days***
SVOC 8270D MOSC	M	EPA 8270D	7/23/2019	***3 Days***
TPHDX MOSC	M	EPA 8015D	7/23/2019	***3 Days***
VOC 8260 MOSC	M	EPA 8260C	7/23/2019	***3 Days***

Sample #: 190718009-005 **Customer Sample #:** SW NATIVE SOIL

Recv'd: ☑ **Matrix:** Solid **Collector:** **Date Collected:** 7/12/2019
Quantity: 1 **Date Received:** 7/18/2019 10:18:00 AM **Time Collected:** 1:27 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	7/23/2019	***3 Days***
OC PEST 8081A	M	EPA 8081A	7/23/2019	***3 Days***
PCB 8082	M	EPA 8082	7/23/2019	***3 Days***
SVOC 8270D MOSC	M	EPA 8270D	7/23/2019	***3 Days***
TPHDX MOSC	M	EPA 8015D	7/23/2019	***3 Days***

Customer Name: FREEPORT MCMORAN - CHINO MINES
PO BOX 10
BAYARD NM 88023

Order ID: 190718009
Order Date: 7/18/2019

Contact Name: SVL ANALYTICAL, INC.

Project Name: SVL #X9G0347

Comment:

VOC 8260 MOSC	M	EPA 8260C	7/23/2019	***3 Days***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	6.0
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	N/A
Is there a trip blank to accompany VOC samples?	N/A
Labels and chain agree?	Yes
Total number of containers?	10

190718 009 **FPCH** Last Due 7/22/2019
1st SAMP 7/12/2019 1st RCVD 7/18/2019
SVL #X9G0347

Chain of Custody Record

COC No. Hurley Soils IRA 2019

Project Name	Hurley Soils
CHINO DP-	
Project Location	Borrow Quarry
Sampler(s)	Alan Weiss (USA)
Project No.	
Project Manager	Isak Larsen

1. See attached list.

Analytical Parameters

Chino Mines Company
Environmental Services Depart.
P.O. Box 10
Bayard, N.M. 88023

Sample Date & Time	Type Comp.	Type Grab	Sample Identification (Field ID)	Matrix	No. of Containers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Remarks
7-12-19 13:05		X	SW Pea Gravel	Soil/Rocks	1	X																				
7-12-19 13:10		X	Base Course McCauley	Soil/Rocks	1	X																				
7-12-19 13:16		X	McCauley Red Rock	Soil/Rocks	1	X																				
7-12-19 13:20		X	McCauley Gray Rock	Soil/Rocks	1	X																				
7-12-19 13:27		X	SW Native Soil	Soil/Rocks	1	X																				

RUSH

Signatures	Date & Time
Relinquished by: Isak Larsen	7-16-19 11:55AM
Received by:	
Relinquished by:	
Received for Laboratory by:	

Shipping Details

Method of Shipment: UPS RED

Air bill No.

Lab Addresses:

SVL
1 Government Gulch
Kellogg, ID 83837

Special Instructions

ANY QUESTIONS CALL
TRISH POTTER
575-912-5319

Analyses Required

Target Analyte List (TAL) metals, in accordance with Table 4-1 attached

Cu, Fe, Pb

SPLP of As, Ba, Cd, Cr, Cu, Pb, Hg, Se, Ag

VOAs- Target Compound List volatile organic compounds (EPA Method 8260B

SVOA- Target Compound List semi-volatile organic compounds (EPA Method 8270C)

Pesticides (EPA Method 8081A)

PCBs (EPA Method 8082)

Total Petroleum Hydrocarbons (EPA Method 8015)

RUSH

Anatek Labs, Inc.

Sample Receipt and Pres[illegible]

190718 009 FPCH Last Due 7/22/2019

1st SAMP 7/12/2019 1st RCVD 7/18/2019

SVL #X9G0347

Client Name: FPCH Project: X9G0347

TAT: Normal (RUSH:) 2 days

Samples Received From: FedEx (UPS) USPS Client Courier Other: _____

Custody Seal on Cooler/Box: (Yes) (No) Custody Seals Intact: (Yes) No (N/A)

Number of Coolers/Boxes: 2 Type of Ice: Ice/Ice Packs (Blue Ice) Dry Ice None

Packing Material: (Bubble Wrap) Bags Foam/Peanuts None Other: _____

Cooler Temp As Read (°C): 6.0 Cooler Temp Corrected (°C): 6.0 Thermometer Used: IR3

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Samples Properly Preserved?	Yes	No	(N/A)	
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)	
VOC Trip Blanks Present?	Yes	No	(N/A)	
Labels and Chains Agree?	(Yes)	No	N/A	
Total Number of Sample Bottles Received: 10				

Chain of Custody Fully Completed?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	Yes	(No)	Unknown	

Record preservatives (and lot numbers, if known) for containers below:

none

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: KHK Date/Time: 7/18/19 10:18

Work Order: **X9G0353**
Freeport McMoRan - Chino Mines

Chain of Custody Record

COC No. Hurley Soils IRA 2019

Project Name Hurley Soils	**Project No.**	1. See attached list.
CHINO DP-	**Project Manager** Isak Larsen	
Project Location Borrow Quarry		
Sampler(s) Alan Weiss (USA)		

Analytical Parameters

Chino Mines Company
Environmental Services Depart.
P.O. Box 10
Bayard, N.M. 88023

Sample Date & Time	Type: Comp.	Type: Grab	Sample Identification (Field ID)	Matrix	No. of Containers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Remarks
7-12-19 13:05		X	SW Pit Gravel	Soil/Rocks	1	X																				
7-12-19 13:10		X	Borrow Quarry McCauley	Soil/Rocks	1	X																				
7-12-19 13:16		X	McCauley Red Rock	Soil/Rocks	1	X																				
7-12-19 13:20		X	McCauley Grey Rock	Soil/Rocks	1	X																				
7-12-19 13:27		X	SW Native Soil	Soil/Rocks	1	X																				

RUSH

Signatures	Date & Time	Shipping Details	Special Instructions
Relinquished by: Isak Larsen	7-16-19 11:55AM	Method of Shipment: UPS RED	ANY QUESTIONS CALL
Received by:	7-16-19 1245	Air bill No.	TRISH POTTER
Relinquished by:		Lab Addresses: SVL 1 Government Gulch Kellogg, ID 83837	575-912-5319
Received for Laboratory by:	7/17/19 10:45		RUSH

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 7/17/19 **By:** C. Flores

SVL Work No: X9G0347

Item	Description	V	NA	Comments
1	Client or project name	✓		FMI-CHINO
2	Date and time of receipt at lab	✓		7/17/19 10:45
3	Received by	✓		C. FLORES
4	Temperature blank or cooler temperature	✓		Temp. N/A °C
5	Were the sample(s) received on ice		✓	NO
6	Custody tape/bottle seals	✓		YES
7	Shipper's air bill	✓		
8	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓		GOOD
9	Analysis requested for each sample	✓		
10	Sample matrix description	✓		
11	The correct preservative for the analysis requested		✓	SOLID
12	Did an SVL employee preserve sample(s) upon receipt		✓	
13	Additional Information		✓	SVL WILL SPLIT SAMPLE FOR PORTION TO SEND FOR SUBCONTRACTING.

V- Verified **NA- Not Applicable**

Comments:

RUSH

Work Product of Crawford Environmental

ORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

GOLDER PROJECT #:	1788061	SITE :	Hurley Yards, Chino Mines
LABORATORY:	Anatek Labs	LABORATORY ID (LAB WORKGROUP #):	SVL #X9G0347
		MATRIX :	Soil (5)

SAMPLE Numbers:			
SW Pea Gravel			
Base Course McCauley			
McCauley Red Rock			
McCauley Gray Rock			
SW Native Soil			

DATA ASSESSMENT SUMMARY

REVIEW ITEM	Metals by ICP/ AES (EPA 200.7)	Hg by CV (EPA 245.1)	Anions by IC (EPA 300.0)	Physical Properties (SM Part 2000)
1. Data Completeness	o	na	na	na
2. Holding Times	o	na	na	na
3. Calibration	na	na	na	na
4. Interference Check Sample	na	na	na	na
5. Blanks	o	na	na	na
6. Duplicate RPD	na	na	na	na
7. Field Duplicate RPD	na	na	na	na
8. LCS, Blank Spike, MFS	o	na	na	na
9. Matrix Spike, MSD	x	na	na	na
10. GFAA, MSA, Serial Dil.	na	na	na	na
11. Other QC	na	na	na	na
12. Result Verification	na	na	na	na
13. Overall Summary	x	na	na	na

O = Data had no problems
X = Problems, but do not affect data
Θ = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].
Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results:

_____

_____

Verified by: ___Diane Crawford_____Date: February 15, 2020

Reviewed by:_____Date:_____

ORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

1. Date Package Completeness

_/_ Case narrative
_/_ Chain of Custody
_/_ Sample Results
__o__ ICV/CCV Results
_/_ Blank Results
__o__ ICP Interference Check Results
_/_ Spike Recovery Results
_/_ Duplicate Results
_/_ LCS Results
__o__ Standard Addition Results
__o__ ICP Serial Dilution

__ICP Linear Ranges

__/__ Instrument Det. Limits
__o__ ICP Correction Factors
__o__ ICP Linear Ranges
__o__ Preparation Logs
__o__ Analysis Run Logs
__o__ ICP Raw Data
__o__ GFAA Raw Data
__o__ Hg Raw Data
__o__ Cyanide Raw Data
__o__ Other_____

/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)…….. *Acceptable: Yes or No*

_√_ ICP/GFAA metals completed within 6 months of sample collection
__ Mercury analysis completed within 28 days of sample collection
__ Cyanide analysis completed within 14 days of sample collection
__ Anion analysis completed within 28 days of sample collection
__ Nitrate-N, Nitrite-N, and O-Phosphate-P analysis completed within 2 days of sample collection
__ Microbiological analysis for Total Coliform and *E. coli* initiated within 24 hours of sample collection

Comments/Qualified Results: Sample was recieved or analysis was conducted after holding time.

3. Calibrations (Check all that apply)…….. *Acceptable: Yes or No*

__ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: not applicable

4. Interference Checks (Check all that apply)…….. *Acceptable: Yes or No*

__ICS A/B Recoveries Acceptable
__AI, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: not applicable

ORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

5. Blanks (Check all that apply)…….. ***Acceptable: Yes or No***

_√_ All parameters analyzed were reported as ND (not detected) or at levels less than the PQL.
__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: none

6. Duplicate (Check all that apply)…….. ***Acceptable: Yes or No***

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

Comments/Qualified Results:

7. Field Duplicates …… ***Acceptable: Yes or No***

__Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: no field duplicates analyzed

8. Laboratory Control Samples, Blank Spikes (Check all that apply)… ***Acceptable: Yes or No***

_√_ LCS %R 80-120%
__LCS %R 50-79% or >120%, results >IDL estimated (J)
__LCS %R 50-79% and results <IDL estimated (UJ)
__LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: none

9. Spike Recovery (Check all that apply)…….. ***Acceptable: Yes or No***

__Spike %R with 75-125%
__Spike %R 30-74%, >125%, results > IDL estimated (J)
__Spike %R 30-74% results <IDL estimated (UJ)
__Spike %R <30%, results <IDL rejected (UR)
__Field blanks used for spike analysis

Comments/Qualified Results:

10. GFAA Performance, MSA, or Serial Dilutions…… *Acceptable: Yes or No*

__Duplicate injection RSD <20%
__Duplicate injection RSD >20%, results > CRDL estimated (J)
__Analytical spike %R 85-115%
__Analytical spike %R 40-85%, results > IDL estimated (J)
__Analytical spike %R 10-40%, results <IDL estimated (UJ)
__Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: not applicable

11. Other QC

Comments/Qualified Results:

12. Result Verification…… *Acceptable: Yes or No*

__All results supported in raw data

Comments/Qualified Results: not applicable

13. Overall Assessment…… *Acceptable: Yes or No*

Comments/Qualified Results:

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

GOLDER PROJECT #:	1788061	SITE :	Hurley Yards, Chino Mines
LABORATORY:	SVL	LABORATORY ID (LAB WORKGROUP #):	X9G0347
		MATRIX :	Soil (5)

SAMPLE Numbers:			
SW Pea Gravel			
Base Course McCauley			
McCauley Red Rock			
McCauley Gray Rock			
SW Native Soil			

DATA ASSESSMENT SUMMARY

REVIEW ITEM	Metals by ICP/ AES (EPA 200.7)	Hg by CV (EPA 245.1)	Anions by IC (EPA 300.0)	Physical Properties (SM Part 2000)
1. Data Completeness	o	na	na	na
2. Holding Times	o	na	na	na
3. Calibration	na	na	na	na
4. Interference Check Sample	na	na	na	na
5. Blanks	o	na	na	na
6. Duplicate RPD	na	na	na	na
7. Field Duplicate RPD	na	na	na	na
8. LCS, Blank Spike, MFS	o	na	na	na
9. Matrix Spike, MSD	x	na	na	na
10. GFAA, MSA, Serial Dil.	na	na	na	na
11. Other QC	na	na	na	na
12. Result Verification	na	na	na	na
13. Overall Summary	x	na	na	na

O = Data had no problems
X = Problems, but do not affect data
Θ = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].
Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results:
The spike recovery value is unusable since the analyte concentration is disproportionate to spike level (iron only).

Verified by: Diane Crawford Date: February 15, 2020

Reviewed by:_____ Date:_____

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

1. Date Package Completeness

_/_ Case narrative
_/_ Chain of Custody
_/_ Sample Results __ICP Linear Ranges
_o_ ICV/CCV Results
_/_ Blank Results
_o_ ICP Interference Check Results
_/_ Spike Recovery Results
_/_ Duplicate Results
_/_ LCS Results
_o_ Standard Addition Results
_o_ ICP Serial Dilution

__/__ Instrument Det. Limits
__o__ ICP Correction Factors
__o__ ICP Linear Ranges
__o__ Preparation Logs
__o__ Analysis Run Logs
__o__ ICP Raw Data
__o__ GFAA Raw Data
__o__ Hg Raw Data
__o__ Cyanide Raw Data
__o__ Other_____

/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

2. Holding Times (Check all that apply)…….. *Acceptable: Yes or No*

_√_ ICP/GFAA metals completed within 6 months of sample collection
__ Mercury analysis completed within 28 days of sample collection
__ Cyanide analysis completed within 14 days of sample collection
__ Anion analysis completed within 28 days of sample collection
__ Nitrate-N, Nitrite-N, and O-Phosphate-P analysis completed within 2 days of sample collection
__ Microbiological analysis for Total Coliform and *E. coli* initiated within 24 hours of sample collection

Comments/Qualified Results: Sample was recieved or analysis was conducted after holding time.

3. Calibrations (Check all that apply)…….. *Acceptable: Yes or No*

__ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: not applicable

4. Interference Checks (Check all that apply)…….. *Acceptable: Yes or No*

__ICS A/B Recoveries Acceptable
__AI, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: not applicable

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 15, 2020 Lab Data

5. Blanks (Check all that apply)…….. ***Acceptable: Yes or No***

_√_ All parameters analyzed were reported as ND (not detected) or at levels less than the PQL.
__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: none

6. Duplicate (Check all that apply)…….. ***Acceptable: Yes or No***

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

7. Field Duplicates …… ***Acceptable: Yes or No***

__Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: no field duplicates analyzed

8. Laboratory Control Samples, Blank Spikes (Check all that apply)… ***Acceptable: Yes or No***

_√_ LCS %R 80-120%
__LCS %R 50-79% or >120%, results >IDL estimated (J)
__LCS %R 50-79% and results <IDL estimated (UJ)
__LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: none

9. Spike Recovery (Check all that apply)…….. ***Acceptable: Yes or No***

__Spike %R with 75-125%
__Spike %R 30-74%, >125%, results > IDL estimated (J)
__Spike %R 30-74% results <IDL estimated (UJ)
__Spike %R <30%, results <IDL rejected (UR)
__Field blanks used for spike analysis

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

10. GFAA Performance, MSA, or Serial Dilutions…… *Acceptable: Yes or No*

__Duplicate injection RSD <20%
__Duplicate injection RSD >20%, results > CRDL estimated (J)
__Analytical spike %R 85-115%
__Analytical spike %R 40-85%, results > IDL estimated (J)
__Analytical spike %R 10-40%, results <IDL estimated (UJ)
__Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: not applicable

11. Other QC

Comments/Qualified Results:

12. Result Verification…… *Acceptable: Yes or No*

__All results supported in raw data

Comments/Qualified Results: not applicable

13. Overall Assessment…… *Acceptable: Yes or No*

Comments/Qualified Results:

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

GOLDER PROJECT #:	1788061	SITE :	Hurley Yards, Chino Mines
LABORATORY:	SVL	LABORATORY ID (LAB WORKGROUP #):	X9H0231
		MATRIX :	Soil (7)

SAMPLE Numbers:			
7299 R2	7306 R3		
7270 R2			
7311 R2			
7279 R3			
7277 R2			
7281 R3			

DATA ASSESSMENT SUMMARY

REVIEW ITEM	Metals by ICP/ AES (EPA 200.7)	Hg by CV (EPA 245.1)	Anions by IC (EPA 300.0)	Physical Properties (SM Part 2000)
1. Data Completeness	o	na	na	na
2. Holding Times	o	na	na	na
3. Calibration	na	na	na	na
4. Interference Check Sample	na	na	na	na
5. Blanks	o	na	na	na
6. Duplicate RPD	na	na	na	na
7. Field Duplicate RPD	na	na	na	na
8. LCS, Blank Spike, MFS	o	na	na	na
9. Matrix Spike, MSD	x	na	na	na
10. GFAA, MSA, Serial Dil.	na	na	na	na
11. Other QC	na	na	na	na
12. Result Verification	na	na	na	na
13. Overall Summary	x	na	na	na

O = Data had no problems
X = Problems, but do not affect data
Θ = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].
Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results:
The % recovery of the spiked sample not applicable because the spike level is less than 30% of the sample concentration (iron only).

Verified by: Diane Crawford Date: February 14, 2020

Reviewed by:_____ Date:_____

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

1. Date Package Completeness

_/_ Case narrative
_/_ Chain of Custody
_/_ Sample Results
_o_ ICV/CCV Results
_/_ Blank Results
_o_ ICP Interference Check Results
_/_ Spike Recovery Results
_/_ Duplicate Results
_/_ LCS Results
_o_ Standard Addition Results
_o_ ICP Serial Dilution

__ICP Linear Ranges

__/_ Instrument Det. Limits
__o_ ICP Correction Factors
__o_ ICP Linear Ranges
__o_ Preparation Logs
__o_ Analysis Run Logs
__o_ ICP Raw Data
__o_ GFAA Raw Data
__o_ Hg Raw Data
__o_ Cyanide Raw Data
__o_ Other_____

/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

2. Holding Times (Check all that apply)…….. *Acceptable: Yes or No*

_√_ ICP/GFAA metals completed within 6 months of sample collection
__Mercury analysis completed within 28 days of sample collection
__Cyanide analysis completed within 14 days of sample collection
__Anion analysis completed within 28 days of sample collection
__Nitrate-N, Nitrite-N, and O-Phosphate-P analysis completed within 2 days of sample collection
__Microbiological analysis for Total Coliform and *E. coli* initiated within 24 hours of sample collection

Comments/Qualified Results: none

3. Calibrations (Check all that apply)…….. *Acceptable: Yes or No*

__ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: not applicable

4. Interference Checks (Check all that apply)…….. *Acceptable: Yes or No*

__ICS A/B Recoveries Acceptable
__AI, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: not applicable

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

5. Blanks (Check all that apply)…….. ***Acceptable: Yes or No***

_√_ All parameters analyzed were reported as ND (not detected) or at levels less than the PQL.
__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: none

6. Duplicate (Check all that apply)…….. ***Acceptable: Yes or No***

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

7. Field Duplicates …… ***Acceptable: Yes or No***

__Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: no field duplicates analyzed

8. Laboratory Control Samples, Blank Spikes (Check all that apply)… ***Acceptable: Yes or No***

_√_ LCS %R 80-120%
__LCS %R 50-79% or >120%, results >IDL estimated (J)
__LCS %R 50-79% and results <IDL estimated (UJ)
__LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: none

9. Spike Recovery (Check all that apply)…….. ***Acceptable: Yes or No***

__Spike %R with 75-125%
__Spike %R 30-74%, >125%, results > IDL estimated (J)
__Spike %R 30-74% results <IDL estimated (UJ)
__Spike %R <30%, results <IDL rejected (UR)
__Field blanks used for spike analysis

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

10. GFAA Performance, MSA, or Serial Dilutions…… ***Acceptable: Yes or No***

__Duplicate injection RSD <20%
__Duplicate injection RSD >20%, results > CRDL estimated (J)
__Analytical spike %R 85-115%
__Analytical spike %R 40-85%, results > IDL estimated (J)
__Analytical spike %R 10-40%, results <IDL estimated (UJ)
__Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: not applicable

11. Other QC

Comments/Qualified Results: All samples required dilution due to matrix or due to high concentration of the target analyte

12. Result Verification…… ***Acceptable: Yes or No***

__All results supported in raw data

Comments/Qualified Results: not applicable

13. Overall Assessment…… ***Acceptable: Yes or No***

Comments/Qualified Results:

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

GOLDER PROJECT #:	1788061	SITE :	Hurley Yards, Chino Mines
LABORATORY:	SVL	LABORATORY ID (LAB WORKGROUP #):	X9L0375
		MATRIX :	Soil (15)

SAMPLE Numbers:			
R1-24-102Pat	R1-38-305Nev	R1-18-102Rom	
R1-29-102Pat	R1-49-305Nev	R1-04-314Rom	
R1-10-502D	R1-04-102Pat	R1-08-314Rom	
R1-05-305Nev	R1-14-102Pat		
R1-15-305Nev	R1-02-102Rom		
R1-25-305Nev	R1-07-102Rom		

DATA ASSESSMENT SUMMARY

REVIEW ITEM	Metals by ICP/ AES (EPA 200.7)	Hg by CV (EPA 245.1)	Anions by IC (EPA 300.0)	Physical Properties (SM Part 2000)
1. Data Completeness	o	na	na	na
2. Holding Times	Θ	na	na	na
3. Calibration	na	na	na	na
4. Interference Check Sample	na	na	na	na
5. Blanks	o	na	na	na
6. Duplicate RPD	na	na	na	na
7. Field Duplicate RPD	na	na	na	na
8. LCS, Blank Spike, MFS	o	na	na	na
9. Matrix Spike, MSD	x	na	na	na
10. GFAA, MSA, Serial Dil.	na	na	na	na
11. Other QC	na	na	na	na
12. Result Verification	na	na	na	na
13. Overall Summary	x	na	na	na

O = Data had no problems
X = Problems, but do not affect data
Θ = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ)].
Z = Data unacceptable [typically data rejected (R)].

Comments/Qualified Results:
The % recovery of the spiked sample not applicable because the spike level is less than 30% of the sample concentration (iron only).

Verified by: Diane Crawford Date: February 14, 2020

Reviewed by:_____ Date:_____

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

1. Date Package Completeness

_/_ Case narrative
_/_ Chain of Custody
_/_ Sample Results
__o__ ICV/CCV Results
_/_ Blank Results
__o__ ICP Interference Check Results
_/_ Spike Recovery Results
_/_ Duplicate Results
_/_ LCS Results
__o__ Standard Addition Results
__o__ ICP Serial Dilution

__ICP Linear Ranges

__/__ Instrument Det. Limits
__o__ ICP Correction Factors
__o__ ICP Linear Ranges
__o__ Preparation Logs
__o__ Analysis Run Logs
__o__ ICP Raw Data
__o__ GFAA Raw Data
__o__ Hg Raw Data
__o__ Cyanide Raw Data
__o__ Other_____

/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

2. Holding Times (Check all that apply)…….. *Acceptable: Yes or No*

__ICP/GFAA metals completed within 6 months of sample collection
__Mercury analysis completed within 28 days of sample collection
__Cyanide analysis completed within 14 days of sample collection
__Anion analysis completed within 28 days of sample collection
__Nitrate-N, Nitrite-N, and O-Phosphate-P analysis completed within 2 days of sample collection
__Microbiological analysis for Total Coliform and *E. coli* initiated within 24 hours of sample collection

Comments/Qualified Results: Sample was recieved or analysis was conducted after holding time.

3. Calibrations (Check all that apply)…….. *Acceptable: Yes or No*

__ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: not applicable

4. Interference Checks (Check all that apply)…….. *Acceptable: Yes or No*

__ICS A/B Recoveries Acceptable
__AI, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: not applicable

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

5. Blanks (Check all that apply)…….. ***Acceptable: Yes or No***

_√_ All parameters analyzed were reported as ND (not detected) or at levels less than the PQL.
__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: none

6. Duplicate (Check all that apply)…….. ***Acceptable: Yes or No***

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

7. Field Duplicates …… ***Acceptable: Yes or No***

__Field duplicate RPD ≤20% (≤35% for soils)

Comments/Qualified Results: no field duplicates analyzed

8. Laboratory Control Samples, Blank Spikes (Check all that apply)… ***Acceptable: Yes or No***

_√_ LCS %R 80-120%
__LCS %R 50-79% or >120%, results >IDL estimated (J)
__LCS %R 50-79% and results <IDL estimated (UJ)
__LCS %R <50% and all results rejected (R/UR)

Comments/Qualified Results: none

9. Spike Recovery (Check all that apply)…….. ***Acceptable: Yes or No***

__Spike %R with 75-125%
__Spike %R 30-74%, >125%, results > IDL estimated (J)
__Spike %R 30-74% results <IDL estimated (UJ)
__Spike %R <30%, results <IDL rejected (UR)
__Field blanks used for spike analysis

Comments/Qualified Results: The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level (iron only).

INORGANIC ANALYSIS
Data Verification Summary Checklist
February 14, 2020 Lab Data

10. GFAA Performance, MSA, or Serial Dilutions…… *Acceptable: Yes or No*

__Duplicate injection RSD <20%
__Duplicate injection RSD >20%, results > CRDL estimated (J)
__Analytical spike %R 85-115%
__Analytical spike %R 40-85%, results > IDL estimated (J)
__Analytical spike %R 10-40%, results <IDL estimated (UJ)
__Analytical spike %R <10%, results <IDL rejected (R)

Comments/Qualified Results: not applicable

11. Other QC

Comments/Qualified Results: Three samples required dilution due to high concentrations (copper only)

12. Result Verification…… *Acceptable: Yes or No*

__All results supported in raw data

Comments/Qualified Results: not applicable

13. Overall Assessment…… *Acceptable: Yes or No*

Comments/Qualified Results: Results should be qualified as estimated ("J") due to holding time exceedance.

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